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BEST IN SHOW

EMILY GOMEZ

Triggers

Fiber, silicone, sterling silver
2019
11 x 12½ x 12½ in.
Photography by Rob Glover

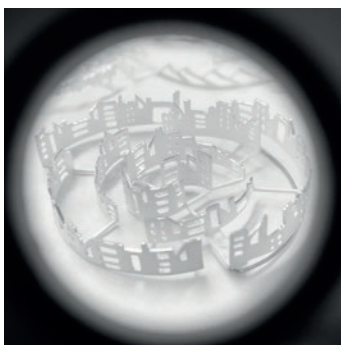
Emily Gomez is an internationally-recognized emerging artist based in Lubbock, Texas. She is currently a senior in studio art at Texas Tech University with an emphasis in jewelry design and metalsmithing. In creating large scale unconventional works, she explores ideas of sustainability in both the environment and in mental health, as well as sexuality and women's issues. Gomez' recent endeavors have been exhibiting in Craft in Contemporary Art and Craft Forms 2019, where her work "Triggers" was featured as the cover of the show catalog. She will also be included in the Jewelry and Metals Survey 2019 *book, to be published in 2020.*

HONORABLE MENTIONS

CHANTEL GUSHUE

Untitled

What Remains series
Nickel silver, silver, bovine bone, borax, polymer, and steel
2019
3 x 2¾ x ¾ in.



KEHAN WAN

The City 1

Sterling silver
2019
2½ x 2½ x ½ in.

SNAG's 2020 conference would have marked a historic milestone: the 50th anniversary of SNAG's first conference. The exhibition theme "Grit to Gold" focused on the future of the field. The entries were juried by Leila Cartier, Executive Director of CraftNOW Philadelphia, and Lindsay Ketterer Gates, Executive Director at Touchstone Center for Crafts.

VIEW THE FULL EXHIBIT AT **snagspace.squarespace.com/2020-juried-student-exhibition-grit-to-gold**

40 YEARS

METALSMITH

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Metalsmith is published by the Society of North American Goldsmiths

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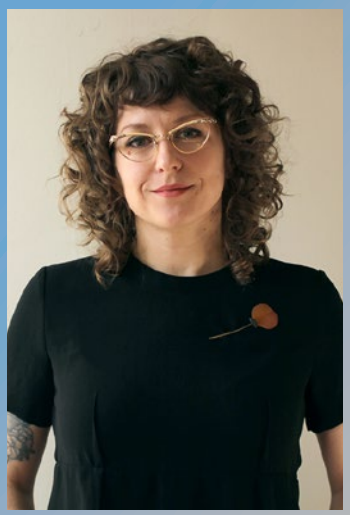

This issue of *Metalsmith* comes at a time when the world is being reconfigured, not only by circumstance but intention as well. In many regions of the U.S., the novel coronavirus rates are surging and the shape of things to come remains uncertain. Meanwhile, communities nationwide are fighting with renewed vigor and increasing support for racial justice and equitable systems and structures. Throughout the country, including three miles from where I sit, "monuments to thieves"—an apt phrase, coined by former Memphis punk band His Hero is Gone in a song of the same name, for the numerous Confederate statues that litter the south—are being removed from their pedestals, whether by protesters themselves or by civic officials compelled by their collective power.

Further, it seems that everything is shifting at an accelerated rate. I mention this as a means of acknowledging the difficulty of contextualizing the content of this issue (which was on the schedule pre-virus and pre-uprising) in a moment when the best and worst of humanity is in full view. For me, the contents of this issue are best summed up by a phrase from Rachel Reichert's article "Artists in Flux": "*a recipe for living*." In ways both direct and subtle, this issue of *Metalsmith* captures our endeavor as individuals, through community and collaboration, to answer the spiritual and philosophical questions that recur throughout history, and an awareness of our impact on the world around us.

We begin at the molecular level in "Findings," with a report on the growing trend of DNA jewelry. In "In Production," UK artist Chris Boland's signature rings bring monumentality to intimate objects that contrast our puny corporeality against the massive scope of the Earth's geological history. Sasha Nixon takes us into the studio of MJ Tyson, whose work reclaims and reconfigures the objects and heirlooms left behind after a person dies.

"LOOK" highlights seven years of the Smitten Forum, a nomadic invitational residency with a DIY ethos spearheaded by Marissa Saneholtz and Sara Brown. Sharona Muir shares observations on the increase in crosscultural and international conversations in the exhibitions and events of the 2019 Beijing biennale and in China's relatively young art-jewelry scene.

Greek jewelry artist Artemis Valsamaki deals in philosophical questions about the nature of humanity, drawing upon mythology and allegory in her bold, colorful works. Both Rebecca Grady's book review of *Bejeweled: Sustainable Jewellery* and Sandra Wilson's article "The New Gold Rush" highlight the burden of human consumption upon our environment, and the necessity for awareness of how we manage our limited natural resources.

We close with Barbara Isherwood's thoughtful remembrance of artist and educator Lois Etherington Betteridge, reminding us our life's work survives us.

Thank you to all the readers who reached out to share their thoughts and struggles of the past six months. You can read some of this correspondence on page 6. I will continue to run these letters as long as you keep sending them. The invitation remains open, and I hope to keep hearing from you: editor@snagmetalsmith.org. ***—Adriane Dalton, Editor***

The mission of *Metalsmith* is to explore, analyze, promote, and document excellence and innovation in the field of jewelry and metalsmithing. In achieving this goal, SNAG will produce and oversee the direction and content of a publication that will serve as a significant resource for the metalsmithing field. The editorial content of *Metalsmith* will emphasize contemporary activities, makers, and ideas and incorporate supportive content, relevant critical issues, and the exchange of viewpoints.

WHEN THE HAMMERS SWING,
ANVILS SING
AND SO DOES MY HEART!

Jack da Silva
Hammers Swing, Anvils Sing
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JACK DA SILVA'S METAL DESIGN STUDIO
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NOTES FROM OUR READERS

METALSMITHING IN A GLOBAL PANDEMIC

METALSMITH
TECH
The Effects of the Trade War on Jewelry and Metal Artists
Pushing the Boundaries of Powder Coat Painting
Polishing to Perfection

Metalsmith Tech Volume 3, Issue 1 Spring 2020

IN THE SPIRIT OF METALSMITHING COMMUNITY, I am reaching out from across the Pacific Ocean in Townsville, north Queensland, Australia. When I received *Metalsmith Tech* and read the first sentence of your intro, I immediately laughed, as exactly the same thing happened to me.

COVID-19 hit our shores in March, and everything was cancelled and went crazy. I lost projects and my husband was diagnosed with a nasty cancer. During all this, I too woke in the middle of the night, with the burning urge to write down a list of COVID-related words. I scrawled the list onto whatever I could find in my half-asleep stupor. I had no idea why I needed to write this list and even made my husband contribute too until we went back to sleep.

I am mostly a sculptor and enjoy doing silversmithing too. I decided to make an artwork based on this COVID list. I applied to our local contemporary gallery, Umbrella Studio (a very supportive gallery) for a paid fourteen-day At Home Artist in Residency (AHAIR) using this list to base an artwork on, which combines my sculpture and jewellery skills. I start the residency June 4th and will be documenting it digitally with a video and Pecha Kucha talk and social media.

—Alison McDonald
Queensland, Australia
www.alisonmcdonald.com.au

I FOUND MYSELF IN A PREDICAMENT when asked to share an updated bio for this issue of *Metalsmith* (see page 20). I was struck by the urge to be ruthlessly honest and vulnerable, something I am craving amidst the loneliness of this pandemic, the renewed energy around civil rights movement(s), and in response to the issues resulting from the lack of meaningful national support and leadership.

It feels important to say how exhausted and frustrated I really am. It feels important to name the total lack of motivation to do anything but maybe eat and shower and, on the good days, pick up the phone to hear the voice of a loved one. Right now, being human and authentic feels more beneficial than hitting those CV high notes for the heavy ego strokes.

It made me realize that I want to read bios that truly represent where we are. I want to know the details about the others who are unemployed jewelers, educators, studio artists, gallerists, or production workers. I want to hear from others who, with inconsistent employment or resources, are feeling the uselessness of their BFAs and MFAs beyond the bubble of academia and compounded by the weight of their student loan debt. I want to know how others are handling juggling the "essential" jobs they have picked up to make up for the lag in the sales of their work. I want to hear about the neighbor who checks in on them and brings them food, or how they spend nights shouting for change in the streets. I want to know if during this time, without a professional affiliation, employment, or functioning studio space, there is anything keeping them sane through the corresponding personal and professional identity crises.

I am planting a seed here: things are difficult for so many people right now. If you find that you don't need to lean on anyone, hopefully you are making yourselves available to lean on. Hopefully you are rallying (or starting a gentle rumble) for developing mutual aid and increasing equity in the field.

I hope my honesty in saying how I feel can remind someone that, with everything going on, it is ok to want to rest, to not feel or be "productive," and maybe feel a little less alone.

—Sara Brown
@sarabrownstudio

IN JUNE, I STARTED TEACHING my first online web course for *Metals & Silversmithing I* utilizing Zoom and the online Canvas platform. As an adjunct of more than twenty years, like many, I am satisfying the college metalsmithing curriculum in a completely new platform! This fall, I am teaching two face-to-face/hybrid courses with a maximum of nine students allowed in order to follow local mandates. If we go back to lockdown, the courses will revert to the online/Zoom class format.

In order to teach online, professors are required to complete the extensive, mandatory iTeach training with unfortunately no compensation. I've made videos and revamped everything from tool kits and supplies to technical guide sheets, projects in lost wax casting, found object based cold connection projects while covering metal construction, silver soldering, and metal forming, etc. It feels like I have conquered another master's thesis; such a great undertaking in so little time. I am feeling very accomplished, but tired!

Evidently, if I want to continue to have a profession in my field, I must adapt or I will become extinct. Especially during times like these, as artists and educators, we must always continue to grow, problem solve and find a way to push the envelope in order for creativity to survive and thrive when it is needed most.

—Sydney Pener
Associate Professor of Fine Arts
Johnson County Community College
Overland Park, KS

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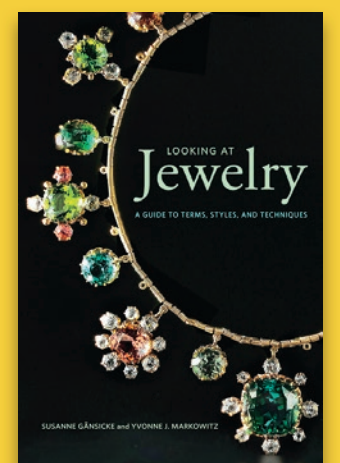

Looking at Jewelry
A Guide to Terms, Styles, and Techniques

Susanne Gänsicke
and Yvonne J. Markowitz

"The expertise of the authors ensures that all, even those who have been 'in the business' for a long period, could learn something and spend more time thinking about this cross-pollination of ideas, designs and techniques in what is a richly international field of study."
—Jewellery History Today

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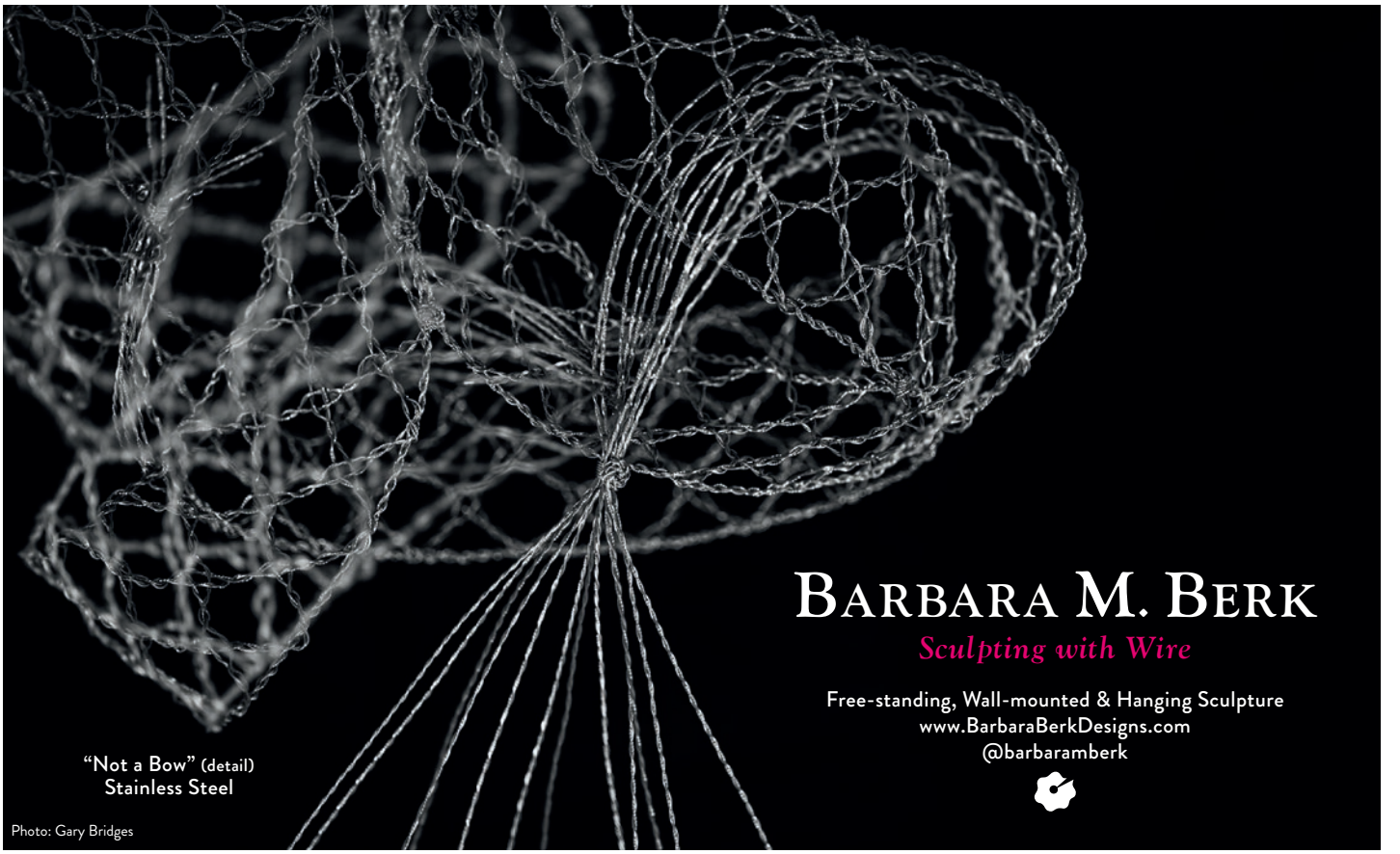
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"Not a Bow" (detail)
Stainless Steel
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NEW & NOTEWORTHY

BY SASHA NIXON

3D printed fine jewelry

Image courtesy of BOLTENSTERN

POWDER ATOMIZATION FOR 3D PRINTING: STEPS FORWARD

Advancements in 3D printing technology continue to expand the opportunities for the creation of jewelry. Powder atomizers work in tandem with 3D printers; they are the first step in which raw material is processed and prepared to be fed into a 3D printer. Powder atomizers like the ATO Noble, developed by UK-based jewelry supplier Cooksongold and Polish 3D printing manufacturer 3D LAB sp. z. o. o., are forging a new frontier in the development of compact powder-atomization technology.

The ATO Noble uses ultrasonic vibration to create a powder from liquefied metal, during which the use of plasma stabilizes the shape of the granules. Precious metal rods or wire are subjected to ultrasonic plasma atomization to melt the rods into powder, which is then incorporated into the 3D print. According to the developers at Cooksongold, the ATO Noble's patented plasma atomization process means that the powder is perfectly spherical every time. A consistently spherical powder improves the consistency and quality of the final 3D print. Current powder atomizers operate with a certain amount of waste in the form of oversized or rough powders that cannot be used, but the plasma atomization process reduces the loss of precious metals, thanks to the resulting powder's consistent shape. It also allows designers to produce only as much powdered raw material as is needed, rather than the large volume required by previous larger atomizers.

Compared to earlier powder atomizers, the ATO Noble is compact (approximately 78½ x 32 x 45 in.). The machine's size and ability to accommodate smaller projects may help make the technology available to smaller, boutique jewelry operations. These benefits set the stage for use by a wider population of designers, allowing them to be more efficient with resources while encouraging an acceleration of innovation using 3D printing in precious metals.

Austrian jewelry brand BOLTENSTERN (3D Printed Fine Jewelry) was among the first designers to combine designs driven by powder-atomizing technology, 3D printing in precious metals, and fine jewelry. As their designs evolve in conjunction with printing technology, they explore setting stones in new ways. About the ATO Noble, Marie Boltenstern, Managing Director & Head of Design at BOLTENSTERN (3D Printed Fine Jewelry), said, "With direct precious metal 3D printing at the heart of our business, we are extremely excited to learn about the new process of our industry-leading partner, Cooksongold. It is a promising new technology to generate the fine recycled precious metal powder that we use to produce our intricate jewelry designs."

Contemporary jewelry artists like Adam Grinovich, who prints his futuristic jewelry in stainless steel, have also started interacting with 3D printing in innovative ways, treating the technology as a design partner. 3D printing in metals offers a dynamic way for artists to use an evolving technology to create unique and vibrant work.

DNA JEWELRY

DNA tells you who you are, while also connecting you to everyone and everything else on a molecular level. The incorporation of DNA into jewelry is a physical distillation of this shared biological history, allowing the melding of biological and material narratives.

Jewelry often incorporates materials that carry significance for the wearer: a story, a history. These touchstones serve as access points for memories and represent an outward projection of our deepest held identity. As artist, designer, and founder of the LAByrinth PROJECT, Elaine Young "creates and curates critically informed design about how technology repairs, extends and amplifies our senses."[1] LAByrinth includes Amula, a line of jewelry that encapsulates the DNA of any person, animal, or plant into a futuristic locket.

Elaine Young
OVAO, 2020
Stainless steel, lab grade glass, 100% DNA, glycogen, ethanol
Pendant: 2 x 3¼ cm
Chain: 44½ cm
Photo: Christopher Sonny Martinez
Image courtesy of Elaine Young / Amula DNA Jewellery

Amula founder Elaine Young wears *OVAO* from Amula's Personalized DNA Necklace Collection. Lab grade glass capsule contains 100% DNA (from a person, pet,or plant—one or multiple samples), suspended in glycogen and ethanol.

Photo: Christopher Sonny Martinez
Image courtesy of Elaine Young / Amula DNA Jewellery

Used in this way, DNA is a material powerhouse. *Memento mori* and hair jewelry have had an important presence in jewelry for centuries. Incorporating hair or milk teeth into jewelry is an expression of the human desire to hold a person and the memories associated with that person close. Keeping a part of that person close facilitates that. The act of purifying this material down to the singular molecule that dictated the characteristics of the beloved person or animal is not unlike its historical precedents, and brings the wearer closer to the essence of that individual. Using DNA extraction technology in conjunction with jewelry design is an innovative use of science that brings this iconic form of adornment into the future.

Sentimental jewelry of this kind has primarily been created to mark significant life moments such as births, marriages, or deaths, and these pieces often hold and celebrate the stories associated with their owners. The use of DNA in this context also connects that individual within the lineage of all living things, and hints at the potential for future resurrection.

Young combined her masters in bioethics and medical anthropology with her artistic eye for design, developed through her painting practice "to remind people about the wonder, beauty and significance of the things we can and cannot see for reasons of scale, time, concentration, perspective, external or biological limitations." Young explained that DNA's scale and the fact that it is currently researched as living history makes it a perfect example of the intersection between the infinitely small and the infinitely large, and helps provide a way to see patterns in nature. Amula's mission is to offer a way for any individual to meditate on those interconnected patterns through objects, building a deeply personal connection between the self and the world through adornment.

When a customer purchases an Amula necklace, they receive a DNA kit, for which they can collect samples from any person, plant, animal, or a combination. Once the DNA is collected and sent back to Amula, it is processed at Genspace in Brooklyn, New York. Genspace is a nonprofit organization dedicated to promoting science literacy through universal access to biotechnology. They provide STEM educational outreach, cultural events, and a platform for science innovation at the community level. The synthesized DNA is placed in a glass vial suspended in glycogen and ethanol and the vial is then inserted into a pendant. The futuristic design is drawn and modeled by Young before being fabricated in metal. She is exploring possible organic designs in wood and is developing a prayer stone. Akin to the popularity of people carrying crystals, a luck charm, or talisman, this piece could serve as an apotropaic object. Young's interest in biology and anthropology has led to a desire to question how we know the world, and how different creatures experience the world through different senses, each locked into a different way of being that is dictated by DNA.

Amula is a participant in New Inc., the New Museum's cultural incubator for creative entrepreneurs working at the intersection of art, design, and technology. It is part of a larger body of work that is part of the LAByrinth PROJECT, which uses design and fashion to talk about science issues. The project uses scientific data to make tangible the many beautiful and powerful forces that would be otherwise invisible. Their line of bomber jackets, for example, maps out geopolitical issues, data visualizations, and scientific images, transforming them into wearable statements. Young places what she calls "her most difficult ideas" inside the jacket pockets. These are the ideas that she has not been able to work through completely in the creation of the jacket. These jackets, the Amula necklaces, and other wearable statements all embody the LAByrinth PROJECT brand concept: "inspired by science and science-fiction aesthetics and narratives that question the future of human-ness."

Sasha Nixon is an independent curator, jewelry historian, and metalsmith. She is a member of the Museum of Arts and Design's Exhibition Design and Installation team and a critic at the Rhode Island School of Design. She was awarded the 2017 Society of North American Goldsmiths' Emerging Curators Grant.

1 A Toronto native, Young is now based in New York and Hong Kong.

CHRIS BOLAND: HENGE-ING THE STONE

BY ANDREA DINOTO

Citrine Chain Earrings, 2016
Citrine, silver
15 x 50 mm
Image courtesy of the artist

IN THE CREATION OF HIS BOLD AND COLORFUL DESIGNS, Chris Boland selects gemstones for their beauty, of course, but more essentially for their prehistoric geological stories, and how their distinctive colors and markings bear witness to upheavals that formed continents. The material evidence of such phenomena lies in a stone's inclusions, inorganic substances which range from bits of mineral to linear or fernlike (so-called dendritic) structures that can appear hand drawn. In small stones, inclusions may be visible only under magnification, but at ten carats or more, "they become apparent," says Boland, whose *Monolith* rings "offer up to the viewer," he says, stunning chunks of rutilated quartz, precious topaz, cognac diamond, and more in stark rectilinear settings. Mounted in oxidized or minimally polished silver, Boland's rings can appear as henge-like sculptures, remarkable for their lapidary brilliance and natural markings.

Boland was raised in the historic city of York, where, he says, "I was surrounded by the eroding limestone of its ancient walls and churches. For as long as I can remember, I've been fascinated with materials, rocks and metals in particular." Now thirty-six, Boland has been a self-supporting jeweler since 2007, the year he graduated from Sheffield Hallam University with a B.A. (Hons.) in metalwork and jewelry. The notion that he could actually make a living from jewelry—"I had always figured at some point I would have to get 'a proper job'"—was sparked during his senior year at university when he spent a semester in Seoul, South Korea. "I took a stone course, and for the first time visited a gemstone shop, something I didn't even know existed," he says.

Boland bought small stones in Seoul and back home started sketching the inclusions he viewed under a microscope. "Topaz has strong linear inclusions," he explains, "long and drawn out almost like a taffy pull." Rutile, a titanium mineral, appears in quartz and other stones as slender, metallic crystals, and also accounts for asterism in sapphires, quartz, and rubies. He began setting the small stones, but "I was directionless," he says, "and what I made was unsellable." Everything changed when Boland discovered bigger stones with their distinctive markings. "I thought, the stones are the artwork and I'll just make frames," he says. "All I'm doing is being a framer, or curator." His first collection of eight *Monolith* rings "sort of took off," he says, "and work became about presenting these beautiful things."

Boland resides in Sheffield—another historic city known for metalwork—where he shares a studio with his wife, Emily Thatcher, also a jeweler. He's become a fixture at many of England's contemporary

Chris Boland examining stones with a jeweler's loupe

Image courtesy of the artist

Collection of
Monolith rings, 2017–2019
Silver, 18k gold, palladium 500, tourmaline, quartz, aquamarine, sapphire, spinel, diamond, zircon
2–3 cm each
Image courtesy of the artist

craft fairs, the most prestigious of which is Goldsmiths' Fair, held annually at Goldsmiths' Hall in London. In 2007 Boland was a recipient of a Goldsmith's Hall Metal Bursary, an emerging artist recognition that offers winners a free stand at the fair for the year awarded. In 2019 he was among the fair's 136 exhibitors in the gorgeously refurbished hall, founded by Royal Charter in 1327 as home to the Worshipful Company of Goldsmiths. As Boland explains, each item sold at the fair—hollowware or jewelry—must comply with the similarly ancient UK Hallmarking Act, certifying its precious metal content; the process is achieved nowadays with a laser, a technological upgrade from age-old punches.

Boland includes earrings, necklaces, and bracelets in his production work, but he finds the *Monolith* rings among the most sought-after items. "I think a ring is such a personal thing," he says, "and the pieces I want to make are like handheld sculpture." At UK fairs, and at SIERRAD International Jewellery Art Fair in Amsterdam, and *Loot: Mad about Jewelry* at New York's Museum of Art and Design, Boland has found that sizing is really not a problem, as is often said of rings. "People generally fall in love with the ring that fits them, and if it fits, it's the one they buy."

https://www.chrisbolanddesigns.com

@chrisbolanddesigns

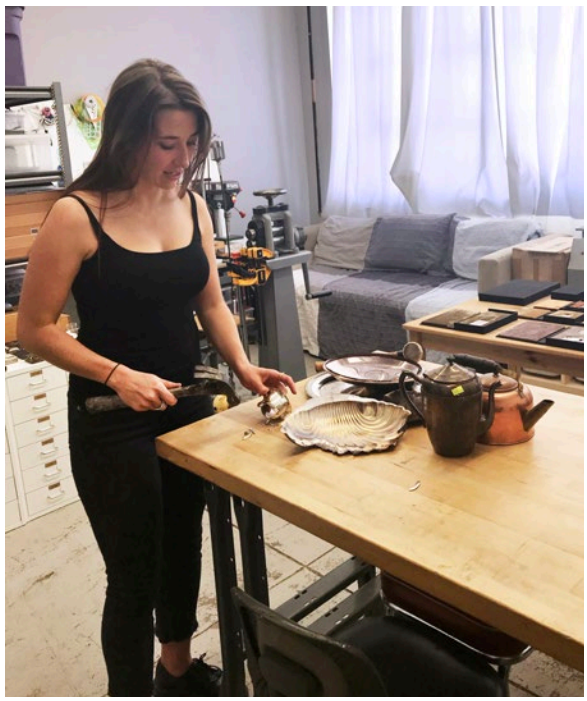
Andrea DiNoto writes about art, craft, and design.

Indicolite diamond drop earrings, 2016
Indicolite, diamond, 18k gold
25 x 7 x 7 mm
Image courtesy of the artist

Note: British jeweler Chris Boland was forced into a month of coronavirus shutdown just as this article was nearing completion. In early June, he provided this update on his business and well-being: "The lockdown threw me for a loop. But it seems the main effect has been confusion rather than structural damage to the business. I ended up having a month out of the studio, then a tentative restart. But now I'm pretty much back to 'normal.' All my summer shows have been pushed back or cancelled, but people seem to be using online sales a lot more, so that's good."

CRUCIBLE, LEGACY, AND EMBODIMENT: MJ TYSON

BY SASHA NIXON



Right:

MJ Tyson in her Hoboken, New Jersey studio, 2019

Photo courtesy of the author

MJ TYSON CREATES POWERFUL PHYSICAL MANIFESTATIONS OF IDENTITY by manipulating the social legacy contained within collected objects, and the disconnect between the longevity of these objects and our bodies, for which she was recently awarded the 2020 Art Jewelry Forum Young Artist Award. Tyson splits her time between her artistic practice, teaching at Pratt Institute, and serving as education coordinator and instructor at Brooklyn Metalworks. For her, teaching is an opportunity to give back to the jewelry community and contribute to the growth of future artists.

A New Jersey native, Tyson maintains a studio nestled in a quiet corner of Hoboken, inside an industrial building converted for artists. Within, she has devoted a large area to crates and shelves containing the gathered remains of lives—her raw materials. The rest of the room holds a bench, a casting station, and a large wooden work surface. A couch and a flood of natural light filtering through semi-sheer curtains create a peaceful and comfortable atmosphere.

Upon my arrival, Tyson greeted me: "I know you had suggested that maybe I could make something while you were here, but I thought I could destroy something." This suggestion epitomizes the mercurial divide between the acts of creation and destruction; one generates the other, in a continual cycle. This perspective is characteristic of Tyson's process. Her invitation to destroy is the perfect introduction to how she perceives the world and processes it through her work. Tyson explains,

> "I am interested in funerary culture; the way that we behave around bodies and around the objects people collect around themselves, objects that become extensions of the body. What is passed on and what is deemed a significant object? What is deemed waste and gets pushed away or discarded? We all collect things around ourselves as if we're going to live forever. There is this interesting behavior that I observe around what people do with other people's stuff when they die. I think that this behavior is a reflection of how we think about lives and bodies."[1]

Tyson's work focuses on the sentimental ties between people and their possessions. Her interest in material culture and the ephemerality of value inspired her to gather objects from estate sales and reflect on cycles of death and rebirth and destruction and creation through objects. In her studio, Tyson set right to work, pulling a heart-shaped jewelry box, a teapot, a sugar dish, and several platters from a large plywood crate. These objects were then subjected to the blows of a hammer as she removed any fabric or plastic and manipulated them into more manageable shapes. After this first step, these disparate objects would be melted together, their collective sentimental power distilled into a single form—

The Attic, 2019
Reconstituted jewelry
7 x 5 x 1 in.
Photo courtesy of the artist

Pray for Us (with detail), 2019
Devotional medals, sterling silver
9 x 9 x 1 in. (21 in. long)
Photo courtesy of the artist

a process that recalls the creation of a reliquary or cremation urn, where the essence of a religious icon or individual is compressed within a single venerated object. Using an unconventional casting method, in which she holds a torch to the edge of these objects while holding them aloft, Tyson lets melted drops fall into a mold as their forms liquefy. Other objects that were placed inside the mold before the casting remain partially visible, serving as signposts, clues hinting at past lives.

The ingot mold Tyson uses invokes the recycling and distilling process and resonates with the deep history of metalsmithing, as a tool that has been used to repurpose metal since the Bronze Age. Its rectangular shape also evokes the filled negative space inside a box, a space where precious objects are kept.[2] For her more sculptural series such as *Homes*, Tyson created molds that evoke the four walls of a house. Here, all of the objects she melted down to form each structure were sourced from a single estate. While working on jewelry series like *Inheritance*, she allows herself more freedom, selecting widely from her accumulated collection of jewelry, carefully choosing objects that she intuitively feels are right for each piece.

In her *Bodies* series, Tyson allows herself to break from her restrained system of working. She uses recognizable vessel forms to suggest human bodies and transitions. These forms undergo certain processes in which they break or deform, decay or grow. For Tyson, this is a return to funerary practices, and an exploration of modern Western society's aversion to change, even in our bodies. She uses wax as a stand-in for the body, forming and distorting it as a reference to the way life molds flesh.

This desire for, and futility of, a wish for consistency is the common link between these bodies of work. In Western society it is assumed—erroneously—that objects will stay the same forever if cared for properly. Tyson manipulates the transformative quality of metal, therefore intervening in the lives of these objects. The physical form of heirloom jewelry evolves as it is passed down through generations. It may gain engravings or morph from a hat pin to a pendant as owners and fashions change. Just as the physical properties change, the piece's emotional significance changes. Sentimental meaning accrues like a patina with each change of hands through a family until, if sold at an estate sale, all can be lost, a traumatic event in the life of the object that echoes the death of the owner.

Tyson's work is meant to be treasured as if it were the distilled remains of a life or lives. She makes custom boxes for much of her small-scale work as an indicator of its preciousness. In her studio, displayed on a filing cabinet, are the remains of vintage jewelry boxes of all sorts. What fascinates Tyson most is that when the covering is removed, she often discovers that they are recycled from signs or other objects pressed from their original use into a new form. Her next project explores the potential of these cases, and their power to impart significance to any object within.

Recently Tyson has been working with devotional medals; one such piece, *Pray for Us*, was featured during Tyson's 2019 NYC Jewelry Week exhibition. "What are saints and other religious figures if not models for our own lives in the face of mortality?"[3] she says. For Tyson, these medals, found while sourcing material, symbolize "concern for the body and wishes for things like safety, wellbeing, and belonging. They disperse one symbolic body onto many physical bodies."[4] In works like *Pray for Us*, Tyson has combined a mass of individual medals into a single collective piece, symbolically connecting many bodies, hopes, and wishes for the future.

Sasha Nixon is an independent curator, jewelry historian, and metalsmith. She is a member of the Museum of Arts and Design's Exhibition Design and Installation team and a critic at the Rhode Island School of Design. She was awarded the 2017 Society of North American Goldsmiths' Emerging Curators Grant.

1 MJ Tyson. Studio visit and interview with the author. September 17, 2019. / **2** Graciela Gestoso Singer, "Small Ingots and Scrap Metal in the Eastern Mediterranean during the Late Bronze Age," in *There and Back Again—the Crossroads II*. J. Mynářová; P. Onderka; P. Pavúk (eds.). Prague: Charles University, Faculty of Arts, 2015: 89. / **3** MJ Tyson. Statement provided to the author, April 10, 2020. / **4** Ibid.

SEVEN YEARS SMITTEN

BY MARISSA SANEHOLTZ AND SARA BROWN

FOR THE PAST SEVEN YEARS, the Smitten Forum, a curated traveling residency program, has created a different type of social experience for makers and metalsmiths.

When conceptualizing the project in 2013, cofounders Sara Brown and Marissa Saneholtz agreed that simplicity would be key, and that they would endeavor to assemble a group of participants at varied points in their careers who also represented a wide range of materials and ways of thinking. Having no official schedule other than when to arrive and depart, and to share a family-style dinner with the group every evening, what remains important is that the Forum be primarily composed of time in the studio. An open schedule allows the participants to focus on working towards individually set motives during the week, whether that be completing a body of work for an exhibition or trade show, researching the local flora and fauna, writing a grant, collaboration, or pinning down where they are heading next in their work.

The formula remains a constant, but the variety of personalities and studio practices in such an intimate setting allows for each iteration of the project to have a distinct dynamic. However, all have culminated in a similar sense of camaraderie.

Moving to different areas of the country is beneficial not only to the artists involved but to the hosting craft centers as well. Each cohort provides an introduction to a pool of potential workshop instructors, and the winter scheduling is a source of supplemental income during a typically "off" season. Past Smitten Forums have been held at Arrowmont School of Arts and Crafts in Gatlinburg, Tennessee; Pocosin Arts School of Fine Craft in Columbia, North Carolina; Mendocino Art Center in California, and Ghost Ranch Education and Retreat Center in Abiquiu, New Mexico.

After every Smitten gathering, a catalog is produced to document the experience. It highlights each artist involved through their work and short essays, and disseminates the highly coveted recipes of the meals shared. The most recent event celebrating the Forum is *Six Years Smitten*, a traveling exhibition sponsored by Rio Grande. First shown at form & concept gallery in Santa Fe in 2019, it then traveled to the ECU Material Topics Symposium in Greenville, North Carolina, and will be on view this fall at Cabrillo Gallery, Cabrillo College, in Aptos, California.

Brown and Saneholtz hope that the Smitten Forum will continue to open up opportunities for the participants and organizations involved, while creating and reinforcing relationships within the field that they are so proud to be a part of.

@smittenforum

Critique at Arrowmont School of Arts and Crafts (Smitten Forum 2014)

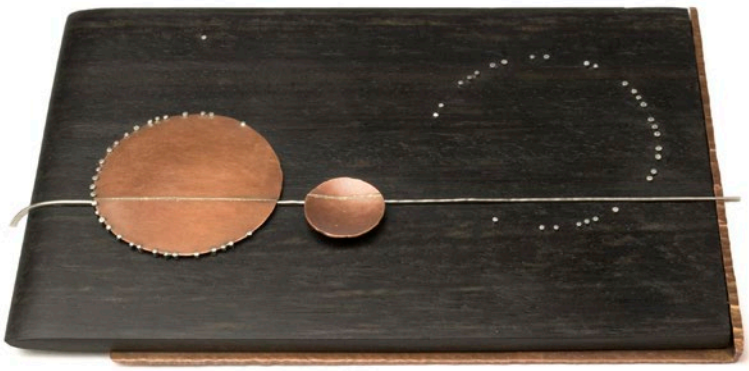
Photo: Sara Brown

Marissa Saneholtz makes narrative-based jewelry and objects using humor and sarcasm. In addition to co-founding the Smitten Forum, she is currently teaching at Bowling Green State University in Bowling Green, OH.

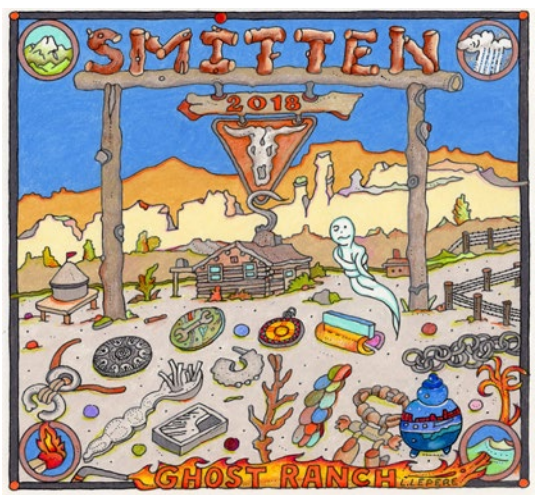
Sara Brown is a studio jeweler and object maker. Her work draws inspiration from the effects of placelessness in relation to memory and personal histories. She is co-founder of The Smitten Forum, *and collaborates with multimedia artist Kristina Smith.*

Opposite:

Robert Ebendorf
Bird in Flight with Gift, 2014
Tin, pearl, gold object,
mixed media
7 x 12 x 1½ cm
Photo: Sara Brown
Smitten Forum 2014



Cappy Counard
Bowl 5, 2018
Sterling silver, copper, ebony
13 x 8½ x 2 cm
Photo by the artist
Smitten Forum 2018



Leslie LePere
Smitten 2018, Ghost Ranch Catalog Cover, 2018
Ink, colored pencil
22½ x 21 cm
Smitten Forum 2018

Shingo Furukawa
Untitled (Push and Pull), 2014
Steel, aluminum, brass,
found objects/materials
38 x 22 x 20½ cm
Photo by the artist
Smitten Forum 2015

Kristina Smith
Jack da Silva, Mendocino, CA, 2019
Shot using a Wista 45-II with a Caltar II-N 135mm lens with Ilford HP5+ film
Smitten Forum 2019

Martha Banyas
Ebb & Flow, 2016
Enamel, copper, wood
43 x 40½ x 5 cm
Photo: Paul Foster
Smitten Forum 2017

Marilyn da Silva
Leaf Bowl III, 2009
Copper, gesso, colored pencil
23 x 18 x 18 cm
Photo: M. Lee Fatherree
Courtesy of Mobilia Gallery
Smitten Forum 2019

Jennifer Wells
Archways Up & Down Necklace, 2016
Copper, sterling silver, steel, liquid enamel
6 x 8½ x 2 cm
chain: 56 cm
Photo: Sara Brown
Smitten Forum 2016

Hannah Oatman
Collage 04, 2017
Steel, sterling silver, vitreous enamel, 18kt gold
15 x 10 x 1½ cm
Photo by the artist
Smitten Forum 2018

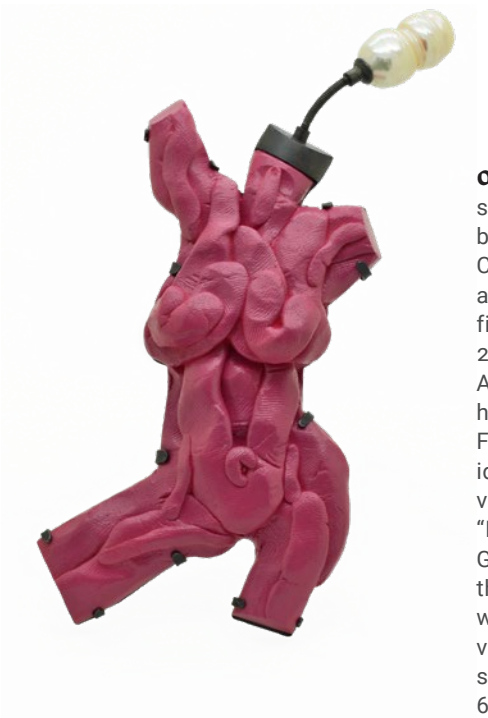
Show and tell on a coffee break. Front: Motoko Furuhashi. Back L–R: Kerianne Quick, Jane Ritchie, and Deb Karash (Smitten Forum 2016)

Photo: Sara Brown

Laritza Garcia
Raw Growth, 2019
Brass, sterling silver, powder coat
33 in. long
Photo by the artist
Smitten Forum 2018

NOTES ON THE BEIJING INTERNATIONAL JEWELRY EXHIBITION

BY SHARONA MUIR



Jun Hu
Two in One, 2019
Silver, pearl, steel wire, lacquer, resin, spring
14½ x 6 x 2 cm
Photo by the artist

OVER THE NEXT TWO DECADES, some 700 million consumers will bring their money and tastes to China's internal market for jewelry and other high-end goods.[1] This figure created a lot of buzz at the 2019 Beijing International Jewelry Art Exhibition, a biennial event hosted by the Beijing Institute of Fashion Technology (BIFT). What ideas in art and design will China's vast middle class need and want? "It will be a new world," said David Grossman, a former president of the International Council of Design, who spoke during a session of visiting artists' presentations. With some 400 works representing 60 countries, the biennale was an event of impressive scale, but its impact is best understood in a wider context. That context is China's turn from making goods designed elsewhere to itself becoming a font of artistic innovation and design linked to commercial manufacturing. The Beijing biennale, founded in 2013, and BIFT are at the heart of this historic turn.

I've attended the Beijing biennale the past two times. In 2017, the show's theme was "Union and Concurrence," implying East and West working cooperatively in parallel.[2] Now the parallels met: 2019's theme was *Guan Tong*, which Google translates as "linking up" or "threading together," and the biennale's website renders with more nuance as "communicate to the other side," "make known," and "understanding."[3] Threading together hundreds of artworks from around the globe might have made for sprawl, yet the show was focused and cohesive thanks to curatorial attention to differences. Separate galleries, designated by number in two different buildings, were devoted to Chinese fine jewelry, art jewelry by emerging Asian artists, international art jewelry, and a guest show from Birmingham City University. In each space, dark walls set off uncrowded vitrines in accessible clusters, with well-matched groupings of works. Unifying the spaces, wall-mounted screens at various points played music and video from one of the biennale's highlights: the runway show. Before considering the exhibits, this event and its cultural context deserve some attention.

One of the highlights of the biennale is a runway show, in which BIFT's student fashion models perform wearing some of the exhibited works. It's a glamorous spectacle: in 2017, video effects turned the runway into flowing waves. In 2019, the décor was glitzier, with a sparkling floor and ceiling-high projections in real time. The models posed against backdrops of giant faces

Li Li
Warbler Hiding in Green Leaves, 2008
Gao Bingqing water jadeite, Emperor green jadeite, Glass wood, Snow cotton jadeite, titanium, pheasant hair, diamond, sapphire, 18k gold
18 x 3 x 2 cm
Photo by the artist

Work by Qiuyun Huang on the runway at BIFT

Photo: Sharona Muir

or mirrored processions of themselves, as if sashaying in multiple dimensions. The BIFT campus is on a tree-lined avenue adjacent to a Yuan dynasty wall that once defined the limits of the capital; now it lies within Chaoyang district, a cosmopolitan business center.

Like its neighborhood, BIFT combines roots in Chinese history with new horizons. At its founding in 1959, it was a tech-oriented institute of textile technology. Renamed the Beijing Institute of Fashion Technology in the early '80s, it is instrumental in China's turn toward the arts. The institute offers a doctorate in "Rescue, Inheritance and Innovation in Chinese Traditional Costume Culture,"[4] and is home to Beijing's Costume Museum, housing some 10,000 works of traditional dress. BIFT faculty have also designed the uniforms and costumes for the Beijing Olympics, space suits for Chinese astronauts, and an expedition watch for Chinese polar explorers.[5]

During the 2019 biennale, the school celebrated its sixtieth anniversary. Alumni crowded the campus, taking pictures, but BIFT nurtures more than alumni loyalty: it boosts graduates' careers by nurturing entrepreneurial projects on campus and in incubation centers around the country, and providing low-cost studio space and other resources needed to grow. Essentially, BIFT is a hatchery of Chinese industries, and this seems reflected in the professionalism of the biennale's runway show. The titles of the show's three segments, "Homeland," "Humanity," and "Infinity," struck me as a gloss on the biennale overall, beginning with the exhibit of Chinese fine jewelry.

This Chinese fine jewelry exhibit showcased the ornate presentation of precious materials, in traditional and modern designs. A pendant by Li Hong Yu recalled the deco style, with an oblong jade piece secured in stepped pavé brackets. From Li Li, a pair of bird-shaped brooches incorporated titanium tails along with jade and gemstones, for a contemporary touch in a traditional look. In a group of rather generic modern pieces, the richly colored metal described as "superhard gold, .999" was a reminder that the world's new materials are produced in Chinese factories.

China is a relative latecomer to the field of art jewelry. Its first contemporary jewelry department, founded by Teng Fei of Beijing's Central Academy of Fine Art, is less than twenty years old. Nonetheless, the exhibit of emerging artists' works showed fluency in contemporary idioms, and inventive ideas ranging from formal concerns to social comment. Jun Hu's poetically abstract brooches are made of bronze, resin, and lacquer applied with traditional techniques. A female torso, lacquered mauve, is topped with a wired-on double pearl like a light fixture, or a Buddhist symbol of wisdom. In *Blank Face*, a male torso sprouts a leaflike head, suggesting harmony with nature. Merging organic and industrial qualities, these faceless figures evoke the collectivist tradition in Chinese thought. In a more literal vein, Qiang Guo's all-silver face mask replicates, in detail, the filters commonly worn in poor-quality air. Recreated as jewelry, the mask both ritualizes the routine of safe urban breathing and commemorates it. Zhang Jing Xuan Li's series of modified luxury objects, like sunglasses with a

Zhang Jing Xuan Li
Tao Te Jing (modified objects), 2019
Silver, gold, spinel
15½ x 6 x 1½ cm
Photo by the artist

Qiang Guo
Instant and Constant, 2019
Sterling silver
17 x 12 x ½ cm
Photo by the artist

gem-encrusted lens, wittily overindulge in the semiotics of status. Xiangyin Shi's series titled *Hey! Listen!* invites reflection on the relationships between technology and social connection. Assembled on round mini-speakers, these colorful brooches resemble emojis, each in crisis—for example, the blue face vomiting a rainbow flag.

There was a lively play of complement and contrast between the fine jewelry and the emerging artists' conceptually driven jewelry. As the fruit of cultural exchange, the latter vindicated BIFT's effort to create international collaborations and educational partnerships. At the biennale, two regular events are an afternoon of presentations by featured artists, and a symposium on jewelry design education, in which visiting academic artists and their Chinese counterparts exchange ideas. (Full disclosure: my husband, Tom Muir, is a board member of the International Jewelry College Association, which aims to extend international collaboration through BIFT.)

Jivan Astfalck, a UK-based metalsmith who also teaches in China, told me how horrified her Chinese students were by her antique ring, from which one diamond was missing. "There is no wabi-sabi in China," she said. If Chinese jewelry is to reach the "infinity" of artistic possibilities, the way leads through "humanity," or diverse cultural perspectives, like those offered in the biennale's international exhibit. From the show's hundreds of potential cross-cultural conversations, a few unique voices stood out. It is hard to imagine a work more steeped in Western conceptions than Astfalck's necklace titled *Rosa Rubea Homuncula*. Unpolished, synthetic rubies and sapphires, in frames of black powdercoated press studs, surround a core synthetic ruby of 380 carats. The piece references alchemy's project of perfecting the soul through material operations; the homunculus is essentially a lab-created person. Astfalck literally connects premodern magic to modern selfhood: using the press studs, the wearer can arrange components at will, recalling the Foucauldian technologies of the self that partly inspired the piece.[6]

Poet and scholar Susan Stewart's theorizing of the souvenir is suggested by Judy McCaig's brooches, small mixed-media landscapes. The souvenir, Stewart observes, "reduces the…three-dimensional into the miniature, that which can be enveloped by the body, or into two-dimensional representation…"[7] In *Morning Star*, Herkimer diamonds amid painted grasses evoke stars over a field; or, alternately, crystal-headed pins among botanical sketches. Poised between the artwork's reality and the landscape it conjures, each brooch is like the souvenir of a dream. In Shirly Bar-Amotz's haunting *Jump* necklaces, black cords of rubber and other materials thicken into pendants, alive with shadowy figures alluding to the training of attack dogs. Both man and beast are mired in violence from which they cannot "jump" clear. Saerom Kong's necklace titled *Cherry Blossoms*, with its big, twin pink pendants made of pigmented rice grains, celebrates the conjunction of survival and creativity. Finally, offering a distinctively Japanese beauty, Hiroki Iwata's *Metaphysical Objects*

Xiangyin Shi
Hey! Listen! #1, #2, #3, 2019
Sterling silver, copper, brass, mini speaker, wood, found objects, acrylic paint, steel (pin)
7 x 5 x 4 cm (each)
Photos by the artist

Shirly Bar-Amotz
Necklace from
series *Jump*, 2018
Copper, iron, vitreous
enamel, iron powder,
diamond powder, epoxy
resin putty, black rubber
Pendant: 9 x 9 cm
Chain length: 45 cm
Photo: Boaz Nobelman

Jivan Astfalck
Rosa Rubea Homuncula
(necklace), 2012
Sterling silver, powder-
coated brass, vintage garnets,
synthetic raw rubies,
synthetic raw sapphires
40 x 13 cm
Photo by the artist

are brooches composed of similarly proportioned metal strips, enameled in black, white, gold, and grey. They elegantly suggest calyxes or woven bark, minimalist evocations of natural growth.

The tight focus of the traveling exhibition *FERROcity: Iron in the City* complemented the biennale's open-ended theme. *FERROcity* was co-curated by Professor Stephen Bottomley at the School of Jewellery, Birmingham City University, UK, and visiting professor Elizabeth Turrell, and was exhibited earlier in 2019 in Birmingham and in Munich. With jewelry and objects, twenty-two artists responded to the theme of iron as a basic element in civilization and human life. Iron's role in the body inspired some illuminating work, such as Bridie Lander's brooches featuring the hemoglobin molecule's Celtic knot–like shape. Stephen Bottomley's *Watchers*, enameled badges made from recycled watch cases that allude to the artist's father's loss of vision, hovered between the mechanical and the talismanic, between measured time and awareness of mortality. Several works had an elegiac quality, using iron as a symbolic key to the industrial past. Drew Markou's *3 Towers* objects, based on the frail ruins of abandoned gasometers, was a reminder that the moniker "Workshop of the World" had once referred to Birmingham, long before it referred to China. For this reason, *FERROcity's* presence was poignant, adding its historical perspective to the biennale's far-flung international survey.

What will the new world of Chinese jewelry design, riding the latest wave of industrialization, be like? We can only know that it will be new, and that the Beijing biennale is well worth watching as its vehicle and harbinger.

Sharona Muir's prose has appeared in publications like The New York Times*,* Granta*, and* Orion*. She has authored four books and received an NEA fellowship.*

1 Babones, Salvatore, "China's Middle Class Is Pulling Up The Ladder Behind Itself," *Foreign Policy*, February 1, 2019, https://foreignpolicy.com/2018/02/01/chinas-middle-class-is-pulling-up-the-ladder-behind-itself / **2** For the full description of 2017's theme, see: http://www.futuredesign.cn/index.php?r=overview/index&session=2017 / **3** See: http://futuredesign.cn/index.php?r=news/detail&id=50 / **4** See: https://english.bift.edu.cn/school/schooloffashion. / **5** See: https://english.bift.edu.cn / **6** Astfalck's presentation at BIFT was based on her article about this piece, see: Astfalck, Jivan, "Rosa Rubea Homuncula," *Zetesis: the International Journal for Fine Art, Philosophy, and the Wild Sciences*, Vol. 2. No. 1, 2015. / **7** Stewart, Susan. *On Longing: Narrative of the Miniature, the Gigantic, the Souvenir, the Collection*. Durham: Duke University Press, 1993, 137.

Judy McCaig
Morning Stars, 2016
11 x 6 x 1½ cm
Silver,18k gold leaf, herkimer diamond crystals,
aluminium, paint, perspex, found material
Photo by the artist

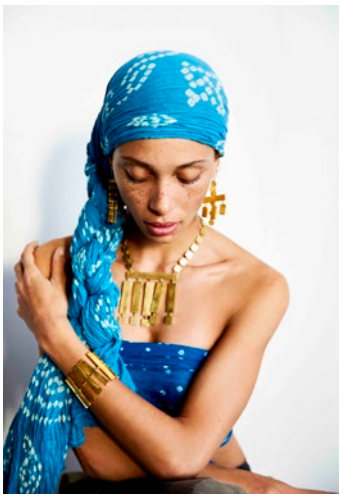
SUSTAINABILITY STORIES: INSIDE THE WORLD OF ETHICAL JEWELRY

BY REBECCA GRADY

ETHICAL JEWELRY HAS COME A LONG WAY in the last two decades. With her book *Bejeweled: The World of Ethical Jewelry*, Kyle Roderick shows us how "jewelry can be visually and poetically compelling, environmentally sustainable, and socially beneficial." This coffee table-sized book, with profiles of fifteen contemporary ethical jewelry designers and two hundred color images, offers a rich visual introduction to the world of sustainable and ethical jewelry. For Roderick, ethical jewelry is created with materials "documented as having been sustainably mined, grown, or handmade by people working under safe, humane conditions and paid Fairtrade wages," as well as jewelry made using recycled or repurposed materials. The book provides a brief and compelling history of ethically-made jewelry, focusing primarily on high-end fine jewelry.

In her introduction, Roderick outlines the evolution of ethical jewelry over the last two decades, tracing how consumer and designer demand pushed gemstone dealers, mining companies, and other suppliers for more transparency in sourcing, documentation, and labor conditions. As Roderick describes, the Kimberley Process, designed to prevent conflict diamonds from entering the market, was established in 2003. The subsequent release of the 2006 film *Blood Diamond* further incited consumers and designers to demand transparency about where their diamonds and gemstones were coming from. Growing consumer concerns about diamond mining also led to the rise in lab-grown diamond companies, like the Diamond Foundry. Even traditional diamond mining companies like De Beers have added their own lab-grown diamond departments in response to increasing demand.

Bejeweled is not just a conversation-starting, coffee-table book about sparkling adornments. While geared towards jewelry lovers and collectors, this book can also serve as an inspiration and a reference tool for those in the jewelry industry, including designers, students, and educators. Many of the



British supermodel Adwoa Aboah sports an array of *Turquoise Mountain* pieces from a 2016 collection. Aboah volunteered her services in order to help Pippa Small publicize her jewelry and the Turquoise Mountain Institute. The institute has produced over five hundred graduates, with 80 percent continuing in their field or going on to advanced study.

Photo: Tierney Gearon © 2019

Centered with a vintage jade carving, Ana Katarina's custom-designed *Jade Flip* ring swivels to reveal a diamond-enhanced octopus on the underside.

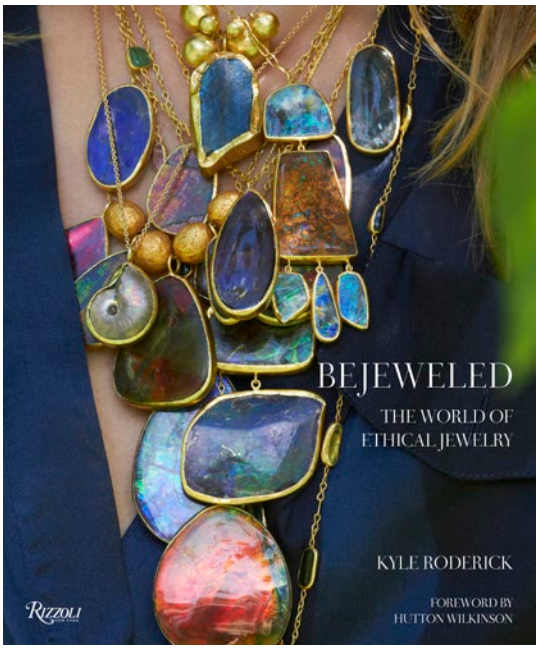
Photo: Emilja Guobyte-Krzeminski © 2019

book's featured designers share how they structure their business, how they source high-quality ethical raw materials and gemstones from suppliers all over the world, and what inspires and drives their creations. For example, featured designer Alice Cicolini describes her work with Muzo Emerald Colombia, a South American emerald mining company that does its own cutting and distribution, offering mine-to-market traceability for their emeralds. "Muzo is creating a more sustainable emerald mining company by hiring women miners, instituting female employee advancement programs and enhancing its environmental footprint by upgrading mining operations and land restoration," says Cicolini. A high-tech operation, Muzo Emerald has secure and ventilated mining operations, provides health clinics for workers and their families, and participates in many local environmental initiatives. Another featured ethical supplier is US-based Columbia Gem House, "which has been building the world's largest mine-to-market supply chain for ethical gemstones since 1976." Columbia Gem House works with organizations, nations, gem mining operations, and gem cutters to promote and "ensure safe workplaces, fair wages, ethical sourcing, and environmentally responsible gem mining."

The jewelry designs featured in these pages are stunning, but most interesting are the stories behind the jewelry. *Bejeweled* shares snippets of the work, process, and inspiration of ethical jewelry designers who work around the world, including Pippa Small, Alice Cicolini, Dewey Nelson, Loren Nicole, Coomi, Ana Katarina, Stella Flame, Anabela Chan, K. Brunini, Samira 13, stôn, Joan Hornig, Sandy Leong, and Karma El Khalil. The foreword is by Hutton Wilkinson, jewelry designer for the LA-based brand Tony Duquette.

Canadian-born and London-based, Pippa Small originally trained as an anthropologist before launching her own jewelry line. She works with artisans at the Kabul, Afghanistan, nonprofit organization Turquoise Mountain to produce many of her jewelry collections. "It's important to me that my collections support the artisans who make them in a substantial way, so that they can maintain economic independence, enhance their artistic skills, and pass on their cultural heritage," Small says.

Hopi artist Dewey Nelson creates his roughly textured and stamped pieces from scrap silver that he melts down and pours into molds carved out of Tufa stone from northeastern Arizona. Nelson says of his jewelry, "It's an organic expression of Hopi that is stamped with symbols of my clan and symbols that mean the world to Hopi, symbols that are grounded in positive, life-bringing actions."



Bejeweled: The World of Ethical Jewelry
By Kyle Roderick
New York: Rizzoli International Publications, 2019
224 pages, $65 U.S.

Image cover: Susannah Baker-Smith © 2019
Image courtesy of Rizzoli

While on a trip to Sri Lanka just before graduating with a degree in jewelry design from the Royal College of Art, designer Anabela Chan visited a gemstone mine and was appalled at the working conditions. Chan says, "I decided to research laboratory-grown gemstones with a mind toward including them in my future fine jewelry range." She launched her brand shortly afterwards and uses mostly lab-grown gemstones and diamonds, with 18-karat Fairtrade gold.

Given the luxury price points of many of the designs featured in *Bejeweled*, celebrity mentions pepper the book's pages. Some readers may find these mentions tiresome, while others will relish the gossip. (In case you were wondering whose jewelry Meghan Markle, Lady Gaga, and Rihanna are wearing, it's Joan Hornig's, among others). For me, what is most striking about the stories presented in this book is not *who* is wearing the featured jewelry, but how and why these pieces were made. The designers showcased in this book are all working to help build a more sustainable and just world through their ethical studio practices. In sharing these stories, Roderick's book offers an important look at ethical jewelry that will appeal to all lovers of jewelry and applied arts, from the enthusiast to the professional.

Both sides of a Muzo emerald and lacquered earrings showcase Alice Cicolini's vibrant color sense.

Photo: Alice Cicolini © 2019

Rebecca Grady is a writer, designer, and photographer based in Santa Fe, New Mexico.

Riddles & Myths

The Jewelry of Artemis Valsamaki

By Bella Neyman

On a narrow street in the bustling Monastiraki neighborhood of Athens, Greece—once considered to be the heart of the jewelry district but now popular with tourists for its flea market—is the sun-filled studio of jewelry artist Artemis Valsamaki.

A rosy hue casts over Valsamaki's fifth-floor space, thanks to the pink cotton curtains hanging over the patio doors. Her studio is fully equipped with all the tools a jeweler needs—yet at first glance, there is no traditional jewelry in sight.

In the corner of the room stands an antique vitrine with a collection of beautiful, brightly painted objects; some resemble children's toys, like cars or kaleidoscopes. Many are assemblage-like with store-bought elements attached, like an hourglass, for example.

A closer look at these curious yet inviting objects reveals that they *are* the jewelry, mostly a collection of brooches and some pendants.

Previous spread:

Catch Me If You Can (brooch), 2019
The Riddle Series
Copper, silver, acrylic, oil on canvas
33 x 15 cm
Photo: Alex Kamitsos

Me as a Reflection of You (brooch), 2017
Myth Series III
Copper, silver, acrylic paint, ink, magnifying glass, flocking
30 x 30 cm
Photo: Alexis Kamitsos

Inside the faux fur lined display cabinet in Valsamaki's Athens studio

Photos: Bella Neyman

Valsamaki is a soft-spoken forty-two-year-old artist with vivid dreams that are brought to life through her work. She uses her art to think through life's bigger questions. For her, creating is a soul-searching and meditative process borne out of the need to "find solutions to the questions that I have in my mind," she says.[1] Each piece begins with a question based on her desire to understand the human condition. For example, in the *Riddle Series*, her most recent body of work, Valsamaki is prompting people to read between the lines. *Catch Me If You Can* (2019) is a brooch made of copper with a handpainted large open mouth superimposed on top of the body of a fish. The red lips have pearly white teeth and horns. The *Riddle Series* is meant to be an exercise in self-exploration, encouraging us to find our own truths and elicit emotions. Valsamaki writes little riddles or myths, found on the artist's website, to go along with each work. For *Catch Me If You Can* she writes: *I can be slippery and I can be eaten but I am not a fish. What am I ? … Words.*[2]

Like the making of jewelry, writing helps Valsamaki understand her feelings. She is particularly interested in universal truths and studying the Indian mystic Osho (1931–1990), as well as Aristotle and Socrates. "I love Osho (in particular) and many other great writers or philosophers because all of them tend to share the same sentiment towards our existence. They dare to say common truths and their beliefs are beyond space and time. I provide answers to the riddles because I also want to give my interpretation."[3] But the work does not lose its power without the text. These messages provide another layer of meaning, but without them the viewer has an opportunity to create their own narrative.

As she develops a series, Valsamaki prefers to focus on creating one piece of jewelry at a time. She works through questions, and when she feels she has her answers, she closes the subject and moves on; essentially compartmentalizing ideas and thoughts in her mind, or "putting them in small boxes," as she says, and closing them when she is ready.

Catch Me If You Can turned out to be an important piece for Valsamaki. Not only was it chosen for the official poster of Athens Jewelry Week 2018, but Ioanna Lalaouni, Director & Chief Curator at the Ilias Lalaounis Jewelry Museum in Athens (ILJM), invited Valsamaki to participate in the 2018 exhibition, *New Horizons: from Jewelry to Sculpture*. Lalaouni was interested in presenting the work of upcoming and established artists exploring forms in jewelry and sculpture at the ILJM, the only museum dedicated to the art of jewelry in Greece. "Her work is visually intriguing as it shares her inner thoughts and worries in forms that are unknown to the Greek public. With no fear of judgment, she schematizes themes, finding inspiration amid human relations, the dream world, and mythology. Her shield remains fiction, which she refuses to tame, transmitting hidden messages and a new visual history to be worn,"[4] Lalaouni wrote in the exhibition text that accompanied Valsamaki's work.

Valsamaki's career began in the early 2000s. She studied graphic design at the Vakalo Art & Design College in Athens, and then silversmithing and jewelry at Mokume Art and Design School, a three-year vocational school in Athens, after which she was required to take a state certification exam in handcrafted artisan jewelry. Upon completing her studies, she began to work as a bench jeweler for various boutiques located in the Greek islands, a common source of income for many Greek jewelers as the islands see a large influx of tourists in the summer months. With the financial crisis in 2011, everything changed. Major projects were postponed and exhibitions cancelled. It became difficult for independent jewelers to make a living. Valsamaki experienced a creative block and knew that she had to make a difficult choice. She abandoned the commercial work to focus on creating unique pieces, even though at the time she did not have a clear vision in mind. Looking at her commercial work, one can tell that the seeds had been planted long before this current body of work was born. Valsamaki's visual language has always been bold. The jewelry is still pictorial, and incorporates text. For example, one necklace has a wide silver torque with a central lacquer medallion that depicts a vintage car; another piece is a brooch of a foot made of silver with a lacquered high-heeled pump and pearl anklet.

We Come in Peace (brooch), 2017
Myth Series IV
Copper, silver, acrylic paint, flocking, plexiglass
25 x 18 cm
Photo: Alexis Kamitsos

Valsamaki prefers to focus on creating one piece of jewelry at a time. She works through questions, and when she feels she has her answers, she closes the subject and moves on.

Making a transition from this commercial work to what she is celebrated for now required Valsamaki to leave her comfort zone. In 2015 and 2016, Valsamaki took several workshops in Athens with Mexican artist-jeweler Jorge Manilla, who is now the Professor of Metal and Jewellery Art as well as the Head of Department at the Oslo National Academy of Arts in Norway. Manilla challenged Valsamaki to not only think about her work in relation to the body but also to open up and tell personal stories. He "started to push her to find solutions and reinvent these solutions in concepts and materials. … to break her own rules and patterns of working. … To improvise techniques,"[5] Manilla says. One of the workshops was called "Corporeo in corporeo," meaning "body to body," thinking about how objects relate to the body.

To this day, despite the large scale and the weight of her pieces, Valsamaki is still interested in the body and convinced that she should be making jewelry. While wearability is not so important to her, she does try on each piece after it has been completed; yet cynically she asserts that no one will actually wear them. Nonetheless, removing the pin back or not attaching a chain makes her feel as if she will lose her roots as a silversmith. For the exhibition *Hidden Curriculum*, presented at Munich Jewelry Week in 2018 and organized by Manilla, Valsamaki wrote, "It is of great importance for me to be able to express my concerns and thoughts in a piece that will come in touch with the human body. Embodying an idea in order to manifest my feelings is a challenge for me, defying sometimes the concept of jewelry, approaching the idea of an object.… Each time, my intention is to create a visual, narrative story to be worn."[6]

While Valsamaki names twentieth-century American artist and illustrator N. C. Wyeth as an inspiration, her work is more in keeping with the rationale and visual language of Surrealist artists like André Breton and Salvador Dalí. Following in the footsteps of these artists, who through their writing or art brought forth their dreams, innermost thoughts, and desires, Valsamaki also shares that her visions come to her in dreams. As in the work of the Surrealists, fragments of body parts often appear in her work. These are "symbols of meaning" for the artist, a stand-in for ideas that she is exploring. The jewelry is large, commanding space and attention. Visually arresting, it is easy to just focus on the flat, graphic images, maybe even be turned off by the naiveté, but the uniqueness of the work draws you in. There are so many layers, both physically and metaphorically, to explore.

Valsamaki's metal of choice is copper because it is lightweight enough for her oversized creations. There is also an economical aspect to it, as fine metals are very expensive in Greece. She buffs the

Sleep Like an Angel (brooch), 2017
Myth Series III
Copper, silver, acrylic paint
20 x 25 cm
Photo: Alexis Kamitsos

For Valsamaki, creating is a soul-searching and meditative process borne out of the need to "find solutions to the questions that I have in my mind," she says.

copper with a hard brush, creating just enough texture to hold the layers of acrylic paint that she uses. She prepares drawings and a maquette before working in metal so that she can have a template for the piece—it is important that she gets the dimensions correct. Once she has completed the front of the piece, she works on the back, utilizing traditional silversmithing techniques—along with some "MacGyver-ing," as she puts it, often doing whatever it takes to bind the layers together. Her choice of materials is considered, and she often searches the internet (and waits up to four weeks) to receive exactly what she needs to complete her vision, like the hourglass in *The Moment*, a neckpiece from 2017. Her pieces are dense with imagery, textures, colors. Each piece is built layer by layer, and while it looks like some elements can move, she is very deliberate in her methods of construction, making sure that each piece is solid, like the crab claws in *We Come in Peace* (2017) or the speedometer in *Think Before You Act* (2017).

Where does Valsamaki's work fit in a country that prides itself on traditional goldsmithing and basks in the glory of its ancient history? Contemporary art jewelry gained recognition in Greece in 1996 when ILJM hosted the group exhibition *Norwegian Jewelry 1945–1995*, featuring works by artists such as Tone Vigeland and Liv Blåvarp. According to Lalaouni, "Although this was a well-documented exhibition, most Athenians found it uninteresting and tasteless. A similar response from the general Athenian public continued with many more exhibitions to follow." She said that it took about another decade, and then just on an "infant level," for artists to start making contemporary jewelry using alternative materials in keeping with trends in Europe and the US.[7]

Self-fish (brooch), 2017
Myth Series III
Copper, silver,
acrylic paint, mirror
23 x 15 cm
Photo: Alexis Kamitsos

Cross My Heart (brooch), 2019
What Are You Made Of Series
Copper, silver, acrylic paint,
wood veneer, flocking
35 x 35 cm
Photo: Alexis Kamitsos

While stylistically Valsamaki's work is a departure from Grecian jewelry traditions, its roots are not. The most prominent example is her use of the human-animal hybrid, a human torso with a fishtail (tritons or fishtailed sea gods featured prominently in Hellenistic jewelry), or deconstructed body parts like teeth or limbs. In *Self-fish* (2017), a human face obstructed by a large mirror with a fishtail warns us not to be too egotistical, for "the cat can eat the fish." Valsamaki explains that fish have a presence in her work because water is one of the five basic elements of spiritual and physical life. Another element, fire, its opposition, is also common.

In *We Come in Peace* (2017), a male face in a space helmet with the body of a crab, the claws as sharp as a weapon. This brooch is about humanity destroying itself. Life and death, dreams and reality, humanity: these are prevalent themes in the work. They are universal themes, but also the stuff of Greek mythology; they do not provide clear answers, just questions. It seems that Valsamaki will never run out of inspiration or work to make. In Greek mythology, only gods are immortal; by creating her own allegorical characters,

Keep the Faith (brooch), 2017
Myth Series III
Copper, silver, acrylic paint
12 x 20 cm
Photo: Alexis Kamitsos

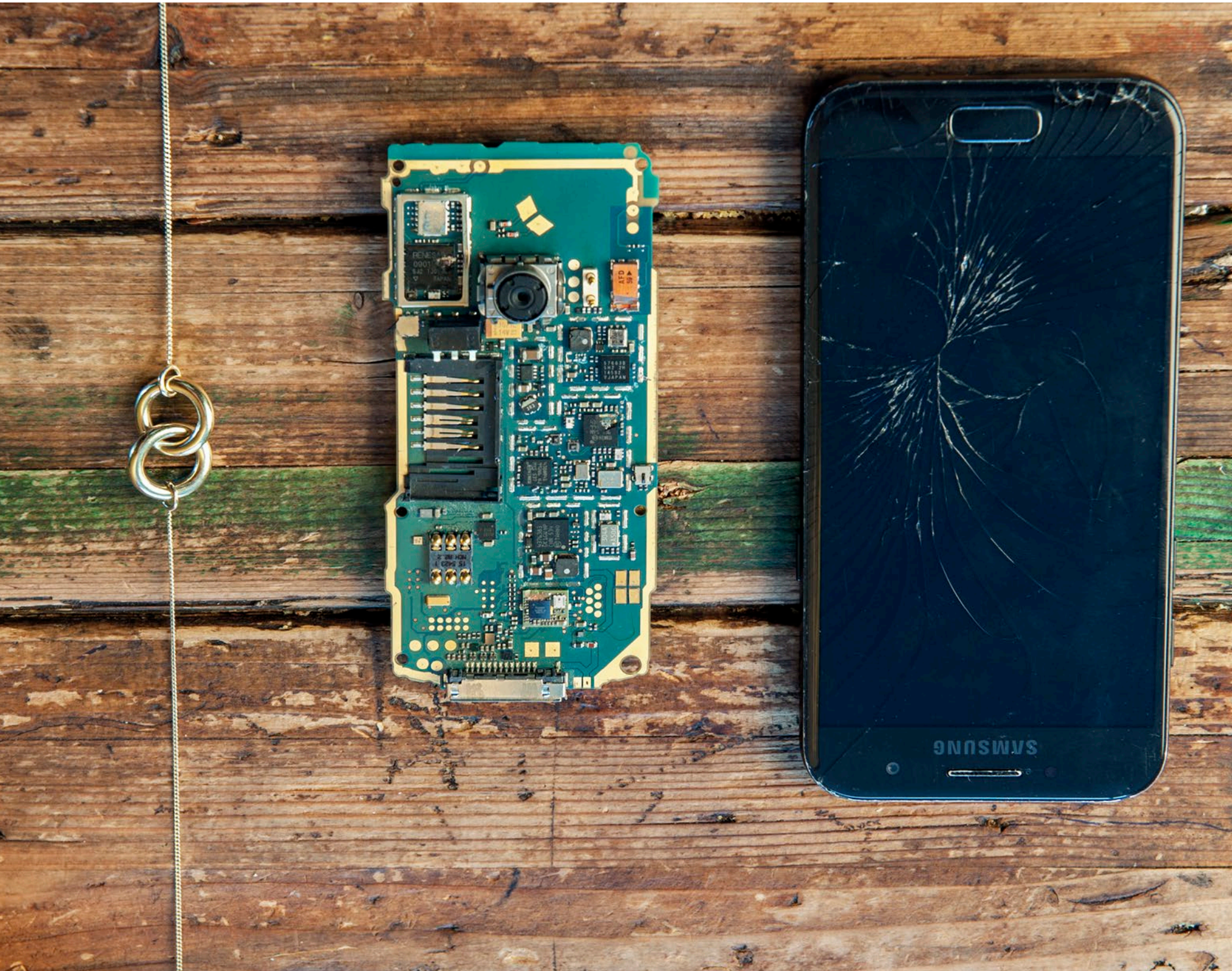
and focusing on universal truths and the human condition, is she bestowing immortality on her own work?

Valsamaki will be the first to tell you that there is no market for her type of jewelry in Greece, although a local gallery, Popeye Loves Olive, does carry it. Her work has seen more success in other parts of Europe. In 2015 she was invited to exhibit at JOYA Barcelona Art Jewellery & Objects Fair, where she caught the attention of Sofia Björkman, owner of Platina Gallery in Stockholm. Valsamaki's solo exhibition *Landscapes of the Mind* opened at Platina in 2017. Björkman says, "Most people she meets love her work. They are often people who are not historically into jewelry. I sold pieces to people who normally only buy paintings. Artemis Valsamaki's work attracts all kind of people, even people who don't understand big jewelry, even the most difficult ones…." Carin Reinders, Director of the CODA Museum in Apeldoorn, Netherlands, which houses the country's largest collection of contemporary jewelry,[8] purchased thirteen pieces for the museum's collection. Reinders admits, " I have rarely seen art pieces so fresh, so thrilling, so authentic with amazing layers of storytelling… Love at first sight."[9]

Valsamaki's brooch *Keep the Faith* (2017) features a pair of legs with hair stubble, toes sticking out of patched socks, a gaping mouth yelling, a cloud gathered at the top. "Keep your head on the clouds and your feet on the ground," she writes of the piece on her website. This is one of those rare cases where the image appeared to her before the question. But in this case, there is not a question to be had; rather, it is a motivational piece. Keep the faith, that if you are a soft-spoken artist, your work will do the talking for you.

Bella Neyman is an independent curator and writer based in Brooklyn, New York. She is also the co-founder of New York City Jewelry Week, which takes place annually in November.

1 Conversation with the artist, April 1, 2020. / **2** http://www.artemisvalsamaki.com/the-riddle-series / **3** Conversation with the artist, April 1, 2020. / **4** Email exchange between the author and Ioanna Lalaouni, April 4, 2020. / **5** Email exchange between the author and Jorge Manilla, April 6, 2020. / **6** Hidden Curriculum, Popeye Loves Olive, March 8-11, 2018, Munich Jewelry Week. Exhibition catalogue. / **7** Email exchange between the author and Ioanna Lalaouni, April 4, 2020. / **8** https://www.current-obsession.com/coda-apeldoorn-becoming-the-jewellery-museum-of-the-netherlands / **9** Email exchange between the author and Carin Reinders, April 5, 2020.


SAMSUNG

the NEW GOLD RUSH

Precious Metals *mined from* Electronic Waste

By Sandra Wilson

Nowa – Seeing the beauty in waste.

Photo: Pam Kat Photography

Raw materials being smelted on an industrial scale.

Courtesy of Tokyo 2020

The next Gold Rush will not draw prospectors to the hills of California, but rather to its landfills. Today, about nine percent of the world's supply of gold is tied up in electronics, and electronic waste is growing faster than any other solid waste stream.[1]

Humans have been mining gold for around 6,000 years. In 2017, the World Gold Council estimated that a total of about 190,040 metric tons has been unearthed.[2] What may come as a surprise is that around two-thirds of this quantity has been mined since 1950. Estimates vary, but it is generally accepted that around 54,000 tons of viable gold sources remain underground. Globally we are currently mining around 2,500–3,000 tons of gold a year—so it is clear that we have a limited supply of this precious metal. Gold is now included on the European Chemical Society's Endangered Elements list, as are silver and copper. Gold and copper are considered of "limited availability with a future risk to supply," while silver is considered to have a "serious threat of extinction in the next 100 years."[3]

Of the gold that is mined today, around 52 percent is used by the jewelry and metal design industry, but an increasing proportion is used in the electronics industry on computer circuit boards, SIM cards, and smartphones.[4] While copper and silver are also used in such devices to conduct electricity, a thin coating of gold, which is non-reactive, is added to these materials to prevent corrosion. "Urban mining" is a term coined in the 1980s by Professor Hideo Nanjyo from Tohaku University Japan describing the stockpile of rare metals in discarded electronic equipment and devices. Interestingly the

yield from urban mining is considerably higher than from traditional ore mining processes. Whereas one ton of ore produces around six grams of gold, one ton of electronic waste, or e-waste, generates around three hundred grams of gold. It only takes around forty-one mobile phones to recover one gram of gold.

Figures vary from country to country, but generally as little as 20 percent of e-waste is recovered and recycled. In some countries this figure is even lower: for example, in India, the world's fifth largest producer of e-waste, the recovery rate is as low as 1.5 percent. For the first time in human history, we have started to *consume* gold; that is, we have started to lose gold in the discarded electronics deposited in landfills.

The most widely used and most cost-effective method for precious metal recovery is *pyrometallurgy*, in which the e-waste is separated into component parts, and parts containing precious metals are smelted. In this process, large quantities of e-waste are deposited into a high-temperature furnace and incinerated until only the precious metals remain.[5] Currently there are just a handful of centers worldwide where pyrometallurgy is conducted on an industrial scale.

With the growing desire among makers to use ethically sourced materials, there is increased interest in using recovered metals from e-waste for jewelry and metalwork. While most precious metals recovered from pyrometallurgy are put back into general circulation and combined with other recycled metal, some jewelry makers are beginning to manufacture collections from precious metals sourced from e-waste.

Eliza Walter
The Nine Mile Reef Earrings, 2019
Sea Treasures Collection
Salvaged 9k gold, man-made aquamarines, recycled antique diamonds
49 x 13 mm
Photo: Zoe Warde Aldam

In 2018, Dell computers collaborated with American actress and jeweler Nikki Reed and her company BaYou with Love on a line of 14-carat gold rings, earrings, and cufflinks using gold from recycled electronic waste.[6] The line was actively promoted in a Dell marketing campaign featuring videos describing the process and showcasing the jewelry, as well as several media articles and interviews.

London-based goldsmith Eliza Walter is another jeweler sourcing all of her gold from "urban mining" for her brand Lylie's.[7] Walter teamed up with Vipa Designs which works with refiners to ensure that the metal is traceable and recovered from e-waste. Lylie's describes itself as a sustainable jewelry brand that recognizes the diminishing source of precious metals, and therefore turns to using gold recovered from e-waste.

Ashley Heather Jewellery, based in Cape Town, South Africa, is another brand that

continues on page 44

BaYou with Love is a lifestyle brand focused on sustainable, ethical fashion and production within jewelry, apparel, home and beauty. Founded by actress and environmentalist Nikki Reed.

Image courtesy of BaYou with Love

Professor Sandra Wilson in the Love Chemistry Laboratory with a solution of gold chloride.

Photo: David Cheskin

MODERN ALCHEMY: HYDROMETALLURGY AND BIOMETALLURGY

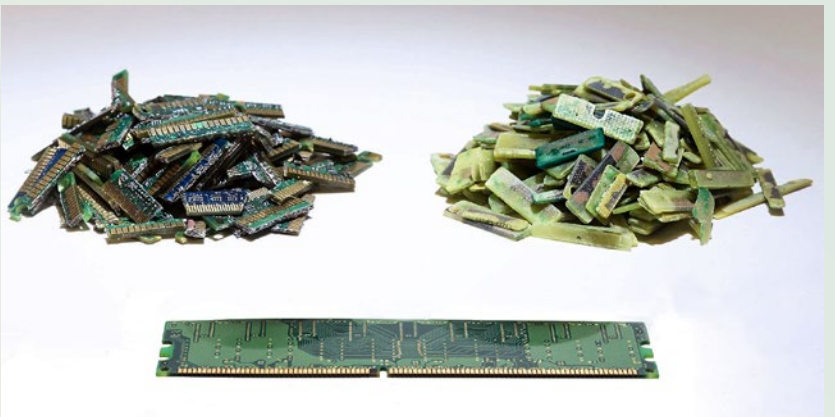
BY SANDRA WILSON

WHILE THE PRACTICE OF THE ANCIENT ALCHEMIST was based on mystical and supernatural beliefs, the modern alchemist puts more store in direct experience, playful practices, and serendipity. Increasingly, scientists and professionals from other disciplines are recognizing the value and benefits of working alongside jewelers and are actively seeking collaborators.

In 2017, I was approached by the Edinburgh University Chemistry Department with an opportunity to act as an artist in residence in Professor Jason Love's laboratory. Professor Love's research group was working on a new chemical compound for recovering gold from electronic waste (e-waste) using a hydrometallurgy process. Hydrometallurgy is a greener and smaller-scale method of recovering precious metal from e-waste that uses aqueous solutions. The chemical combines with gold in such a way that it can be extracted from a solution of the other metals found in an electronic device. This developing hydrometallurgy technology is set to rival the more established pyrometallurgy process.

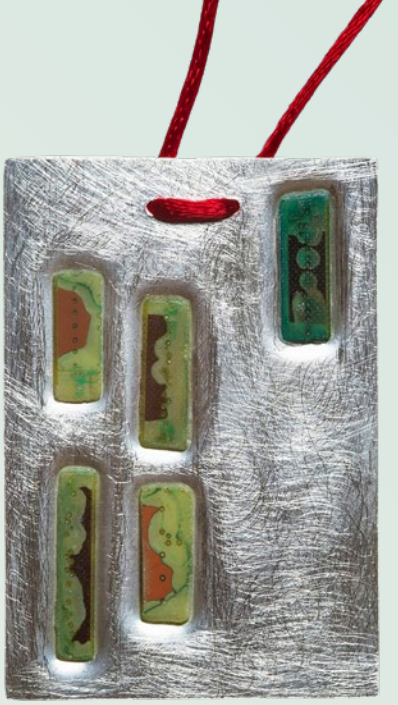
Over a six-month period, I spent one day a week in the laboratory supported by Euan Doidge and Jamie

Sandra Wilson
Gold Chloride Bowl, 2018
Britannia silver
10 x 7 cm
Photo: Diarmid Weir

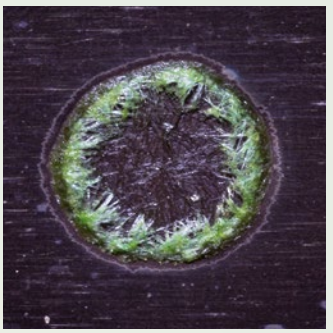


Computer circuit board fingers before and after metal recovery.

Photo: Diarmid Weir



Sandra Wilson
Pendant, 2018
Fine silver, recovered e-waste plastic fragments
5 x 7 cm
Photo: Diarmid Weir



A still image from the time lapse video of a droplet of solution containing all the metals recovered from e-waste.

Photo: Diarmid Weir

Hunter, two of Professor Love's Ph.D students. For my research I used circuit board "fingers" I purchased on eBay (around 250g for about $25). I cut up and collected the areas of the board where the precious metal was concentrated. The material was stirred vigorously in hydrochloric acid for around two weeks using a large agitator to recover all of the different metals present. Doidge describes this process as "molecular gold panning"!

Guiding my practice during this time in the laboratory was a quote from anthropologist and professor Tim Ingold: "The maker is more of an alchemist than a chemist, because as an alchemist the maker is looking at what the materials can do rather than what they are!"[1]

Although I was interested in the chemistry, I had to remind myself that I did not need to become a chemist, and thus did not need to understand everything that was happening—it was enough just to know how to replicate some of the effects.

For me as a jeweler, the benefits of collaboration included the opportunity to work with a new process; to create new surface finishes using an ancient technique of electrochemical replacement plating;[2] and to create new work that raises awareness of the importance of recycling precious metals from e-waste. The next stage of this research is for us to work with metallurgists in India who are recovering on a larger scale which will enable the creation of collections of jewelry made solely with metal recovered from e-waste using hydrometallurgy.

A third method of recovering precious metals from e-waste is biometallurgy. In this process, micro-organisms such as bacteria and fungus are used to recover the precious metals. This method is promising as it uses very little energy and—like hydrometallurgy—can be conducted on site without the need to transport materials. This unique low-carbon method is currently being developed in many chemistry laboratories around the world. Biometallurgy, although a very slow process, may be the next big metal recovery technology.

The ancient alchemists aim was the transmutation of base metals to gold, but the modern alchemist can contribute to the transmutation of an exhaustive to a more sustainable use of precious resources and become a force for societal and environmental change.

1 https://www.diaphanes.net/titel/an-ecology-of-materials-3064. /
2 This is a branch of chemistry that looks at "reduction" and "oxidation" reactions. Interestingly this type of surface metallurgy was common in pre-Hispanic Andean metalwork and the Romans also used it to plate iron with copper.

Mélisande and Niels collected 400 mobile phones to be made into their wedding rings.

Photo: Charella Hulsbosch

Top right:

Mélisande and Niels at their wedding.

Photo: Ik Trouw van jou

creates collections of minimalist jewelry from precious metals reclaimed from circuit boards. Heather says, "We believe that while some metal mining may always be necessary, ultimately our most important extraction operations should be taking place in scrap yards and recycling centres rather than sensitive ecological areas and ancestral lands."[8]

Closing the Loop (CTL) is a Dutch company that offers users, buyers, and phone retailers an easy way to render their device waste free. For each phone the company sells, it recycles a broken phone from partners in Africa to create a "closed loop." When CTL's communications manager got engaged in 2017, the couple made their wedding rings out of gold recovered from mobile phones. They calculated that they would need around 400 mobile phones to get the gold required. Within a year they secured phones from family and friends, traded in these devices with a bullion recycler for the equivalent amount of precious metals, and employed the designer and maker Judigje to make the rings.[9] They maintain that "making rings from mobile phones is about love," and that they received abundant messages of congratulations and support.[10]

In March 2019, two former employees of CTL launched a new jewelry brand called Nowa ("no waste") to highlight the advantages of electronics recycling and the potential to create pieces from gold and silver collected from e-waste.[11] The inaugural line, *Eternal Connection*, was designed by Mickey Phillips, and funded through a Kickstarter campaign.

Only recently have product designers and the electronics industry started considering the **importance of establishing and designing for a "circular economy,"** *that is, an economic system that eliminates waste and considers the whole life cycle of a product.*

Precious metal recovery made the headlines a few years ago when it was announced that the Olympic and Paralympic medals for the now-delayed Tokyo 2020 games were to be made entirely out of metal recovered from e-waste. In 2017, the Tokyo Organising Committee launched a campaign encouraging members of the public and industry to donate their old, broken, or discarded small electronic devices. "The aim was to collect 30.3 kg of gold, 4,100 kg of silver, and 2,700 kg of bronze. Municipal authorities across Japan collected 78,985 tons of e-waste, and around 6.21 million used mobile phones were donated to local recovery centers."[12] Within two years the committee secured 100 percent of the metal they needed to create 5,000 medals. This high-profile project may bring the concept of recovered metals to the forefront of public awareness.

The winning medal designs were chosen after a national competition that invited both professional designers and design students to submit ideas. From 400 entries, that of Junichi Kawanishi, director of the Japan Sign Design Association and Osaka Design Society, was chosen.

Creating jewelry from precious metals recovered from e-waste is clearly growing in popularity, but in some cases the process may be considered a marketing gimmick or "greenwashing," i.e., a tactic used by a company trying to persuade the public that it is doing more to protect the environment than it actually is. After all, moving large quantities of electronic components over long distances generates significant volumes of CO_2. Furthermore, the standard

pyrometallurgy extraction method requires smelting the materials at high temperatures, using a significant amount of electricity, and potentially releasing toxic heavy metals such as lead, arsenic, and mercury into the air, soil, and water. However, smaller scale and potentially less environmentally damaging methods of recovering precious metals from electronic waste such as *hydrometallurgy* and *biometallurgy* are being developed in laboratories (see sidebar, page 42).

To make it easier to recover precious metals and other recyclable materials, electronics companies could make their device components detachable and interchangeable. For example, the Netherlands-based company Fairphone has designed a modular device for which all the parts are repairable.[13] Only recently have product designers and the electronics industry started considering the importance of establishing and designing for a "circular economy," that is, an economic system that eliminates waste and considers the whole life cycle of a product.

Fairphone has developed a free downloadable manual for people to run their own "urban mining" workshop.[14] These workshops raise awareness of the different materials contained inside our electronic devices, and creates public pressure on electronics manufacturers to move toward a circular economy model by making products that are modular, so that metal components can be easily removed, extracted, replaced, and recovered. Jewelers and organizations such as Ethical Metalsmiths may also be interested in running these "urban mining" workshops in schools and the community.

The industrial scale of the pyrometallurgy process means that for individual jewelers there is no way to transform collected e-waste into a specific piece of jewelry. Personally collected e-waste must currently be traded for gold that has previously been recovered from other sources. But even within the restrictions of pyrometallurgy, there is scope for jewelers interested in a more ethical approach to sourcing their materials.

In these examples of jewelry relying on pyrometallurgy, the design focus appears to be on minimalism, simplicity, and the provenance of materials, and so offers art jewelers and metalworkers scope to develop work. In contemporary culture, where relationships are increasingly created online, choosing to make or purchase gold jewelry made from recycled e-waste adds another layer of meaning to traditional forms of jewelry such as engagement and wedding rings. In the future, precious metal suppliers may therefore want to offer jewelry and metalworkers a separate stream of e-waste metal. It could be possible to add a trace element to precious metals from e-waste to ensure its provenance through a chain of custody. Such an approach would also potentially enable jewelers to charge a premium for their work and raise awareness among the public about the need to recycle precious metals from e-waste.

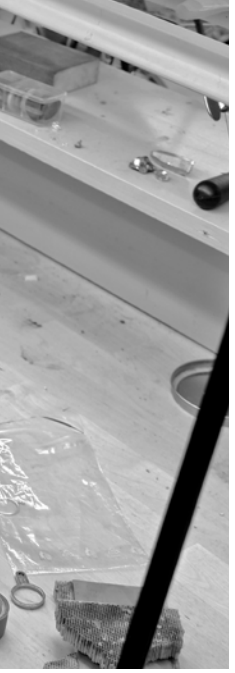
An important way, therefore, to halt the threat to the supply of gold from traditional ore mining in the next 100 years is to place a stronger emphasis on metal recovery from electronic waste. This is vital if we are to stop the loss of gold that ends up in landfill and ensure a sustainable future for this important and significant metal.

The Olympic and Paralympic medals for the now-delayed 2020 games are made from recycled electronics.

Courtesy of Tokyo 2020

Sandra Wilson is a professor of metal design at Duncan of Jordanstone College of Art & Design, part of the University of Dundee, in Scotland. Her research is funded by various UK research councils and her award winning jewelry and silversmithing is exhibited internationally.

1 Based on a lecture given at the Goldsmiths Centre, London, May 2019 / **2** https://www.gold.org/about-gold/gold-supply/gold-mining/how-much-gold / **3** https://theconversation.com/periodic-table-new-version-warns-of-elements-that-are-endangered-110377 / **4** https://www.statista.com/statistics/299609/gold-demand-by-industry-sector-share / **5** The waste is treated in a smelter, ultimately to generate a precious-metal rich "bullion" which is then processed using solvent extraction to separate the precious metals. / **6** https://www.youtube.com/watch?v=WuGiE5oNOlA/ **7** https://lylies.com/pages/biography / **8** https://ashleyheather.co.za/pages/our-story / **9** https://www.judigje.nl / **10** https://www.closingtheloop.eu/news/400-scrap-phones-wedding-rings / **11** https://thisisnowa.com / **12** https://tokyo2020.org/en/games/medals/project / **13** https://www.fairphone.com/en/story / **14** https://www.fairphone.com/en/2015/03/02/host-an-urban-mining-workshop



Artists in Flux

By Rachel Reichert

As artists, we inhabit private landscapes both physical and metaphorical. These personal orbits draw many of us to examine other people's lives in part out of curiosity but also as a means to connect and understand ourselves. We are voyeurs of private spaces, creative works, habits, processes, tools, mindsets… and the list goes on.

As an artist, I am endlessly fascinated by the experiences, spaces, legacies, and histories of other artists. I continue to wonder: Why do we do what we do? And, how do we build lives to support what we do? I yearn to understand how others establish recipes for living in what truly feels like a Sisyphean pursuit.

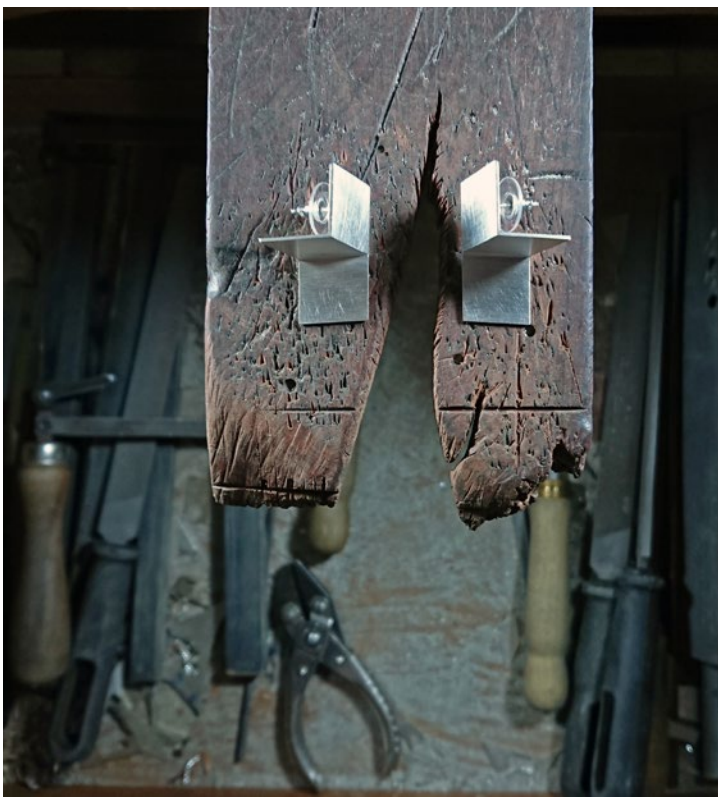
Many of us find ourselves balancing multiple jobs, families, health, and myriad responsibilities—all to be afforded just a few hours dedicated to our creative practice. This unrelenting struggle fuels much soul-searching. What is at the root of our creative impulse? Why do so many of us choose hammers over neckties? How do we arrive in this craft, and what does it mean to each of us? And, most recently, how has a global pandemic affected our relationship to our work and our studios? Examining others' motivations, habits, lifestyles, and sacrifices might help us better understand our personal approach, and how to reset our intentions in this new, murky, and unsettled COVID-19 world.

In 2019, as an experiment, I attempted to get to the heart of these questions with an online survey of artists. Many participated, and five were willing to engage in more in-depth conversations regarding the personal life choices that led them to the studio. I started this project before COVID-19 wreaked havoc on all of our lives and completed it while sheltering in place. This collection of small vignettes examines five private landscapes, some from a pre-COVID-19 context and others during its full onslaught. Hyun-Seok Sim (South Korea), Raquel Bessudo (Mexico), Erica Moody (USA), Claudia Lepik (Estonia), and Everett Hoffman (USA) opened up about their struggles, their hopes and dreams, and the new challenges they face in a pandemic-inflicted world.

These short profiles were crafted through survey, phone, and email conversations with each artist. They have been edited and condensed for clarity. You can share your own story and read more about these and other artists online at www.artistsinflux.com. All photos were provided by the artists.

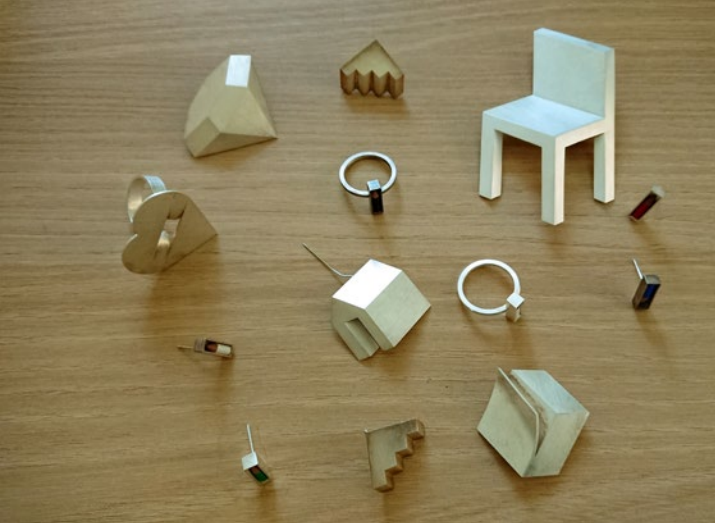
Hyun-Seok Sim

Hyun-Seok Sim is a metalsmith living alone in the rural countryside of South Korea who has established a consistent and quiet practice.



Some people say life and work are different. For me, it is all together. It is the same thing. For me, working is a form of looking. I have to do it. If I don't do it, the circle of my life isn't complete.

My studio was always in Seoul, even when I lived out of town. Just last year, I decided to move to this place, which is one-and-a-half hours outside of Seoul. It is in a quiet, rural countryside. My studio and house are one building, divided between my living space and my studio. When I was in Seoul, my working time was quite



different than the others in my building. I worked every weekday from 5am until 3 or 4pm. My studio was on the second floor of the building, and when I worked, I made a lot of noise. I couldn't hammer in the building because of a complaint from my neighbor. I just did the work, without sound, and my work became quite narrow. I felt like I really wanted to do something different, and being in nature was important to me. I decided to come here and found a beautiful place.

Now, I wake up around 5:30 or 6am, then do some gardening work for an hour or so. I have breakfast and take a rest, then start work around 9am and work through 6pm, every day except the weekends. After eight hours in the studio, I try not to think about my studio work. I try to keep this schedule as best I can.

I don't have a community of other metalsmiths around me. I'm a solitary person; I don't really connect with other people. There are three craftspeople here: a former student of mine, and a ceramic artist next door, and me. Even though I live and work in the countryside, many people know what I'm doing. I don't want to be in total isolation. Instagram feels like a second job for me. I get to share *my* job with 17,000 people (and growing) every day. It's incredible.

Raquel Bessudo

Raquel Bessudo is an artist, metalsmith, and jeweler living just outside of Mexico City. She attempts to strike a balance between her studio practice, motherhood, and time for everything else.

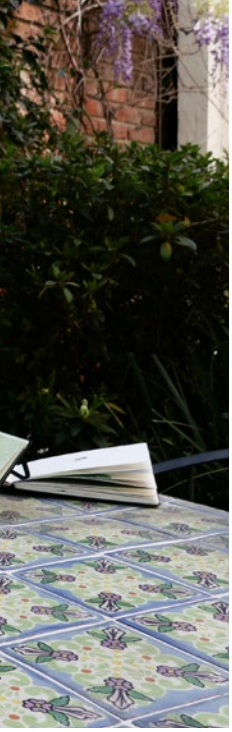
I'm Mexican and have a European Jewish background, so I've grown up with that duality, which I find wonderful and enriching. I feel lucky to be surrounded by all the cultural inspiration from Mexico, but I also carry my grandparents' heritage close, which is very deeply embedded in me.

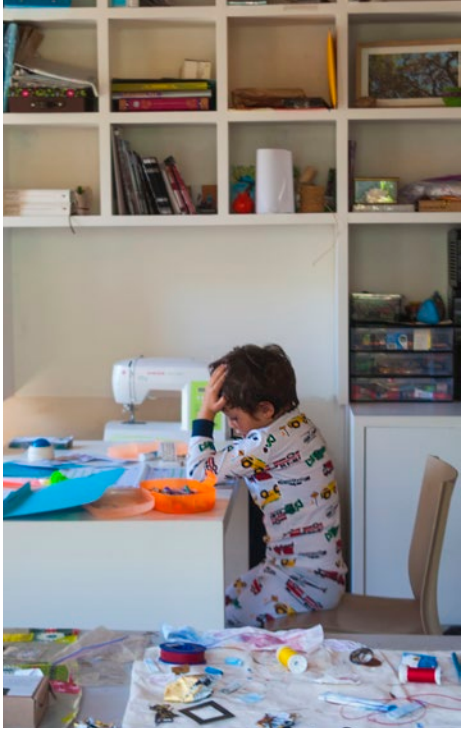
My home is in an area that used to be in the suburbs. Nowadays it's part of the city; though it's not central, it is still called a metropolitan area. My street is by the edge of a hill, and it comes right down to a stream where you can actually listen to the water flowing, especially at night. Sadly, I have to say the stream is very polluted, but I still have the sound, and I can look out the windows.

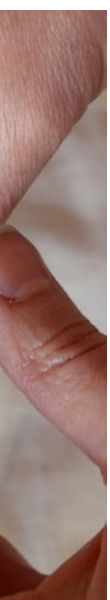
I have my studio at home; it's separated from the rest of the house. I don't share the space, but from time to time, I have my kids asking for things or wanting to join me. My studio started as a room in the house where I put all my equipment together. It wasn't until this summer (after eleven years) that I actually rearranged everything in a more thoughtful way to suit my work—like separating the area where I work with fabric from the one where I work with metals. I love that I have loads of light, very high ceilings, and that the views out the window are all green (mostly treetops), so even though it's an urban environment, it's very quiet, and it feels like an oasis in the city.

COVID-19 and home confinement has, for now, reduced my studio practice to almost zero. My jewelry group has scheduled a forty-minute Zoom conference once a week. We talk about technical issues (I've hardly had any) and address the subject of this crisis and how it is affecting us and our practice. We are hoping to get some creativity out of it. We've talked about the possibilities of turning our experiences into an artistic project.

I genuinely believe that as artists we are lucky to be able to express ourselves through our creative practice, especially with issues such as this one. It accompanies us through life! My every day for the past couple of weeks has mainly been focused on homeschooling my kids and housework.







I needed a space for myself or to at least ease the urge to create. I've started a sketchbook-diary where I'm recording everyday images of areas at home for which I use drawing and watercolors. Of course, as sketches later serve as inspiration for my work, it helps me feel like I'm moving forward. Unexpectedly, I've somehow found some kind of peace in all of this. I think I'm only missing a scheduled time for my studio work, but with three kids at home, it's maybe too much to ask. So I'm taking it slowly, trying not to feel pressure—although there is a voice in the back of my head reminding me of all the work awaiting!

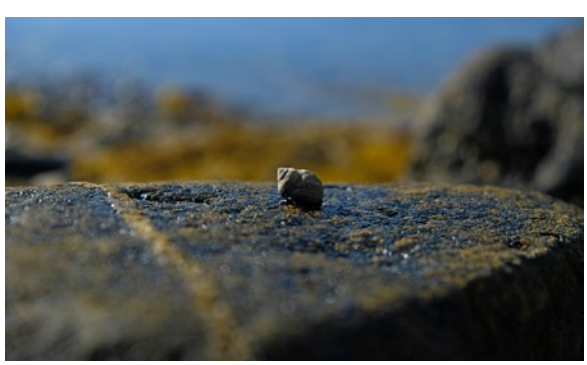
Erica Moody

Erica Moody is a craftsperson living in rural Maine, surrounded by old objects in her historic post-and-beam barn studio.

I moved to Boston and became friends with a few fine woodworkers who were doing restoration work in old historic homes. I became fascinated by their culture of craft and the high-end building trade, and was intrigued by how much passion they had for their craft and for preserving their craft, and how it overlapped into their way of life.

At the time, I didn't know what medium I was into; I just loved their way of living. I started looking around for someone to train me in a high-end building trade or craft. After about a year, I discovered a metalworker who was looking for an assistant. He wanted to do architectural metalwork for architects, homeowners, and artists. I guess that was something I liked about it; the conceptual part was harder for me. The design, ergonomics, and the way it fits into space really hit home.

I lived in Boston for over twenty-four years. It was really cheap to live there in the early '90s. There were a lot of creative things happening. Like many cities, it started getting really expensive. It all started wearing on me: the traffic, the people, the marketing, the billboards, a constant buy-this, buy-that. It just got noisy in all senses of the word. My shop rent was pushing what was possible for the type of business I



had. I started looking to move somewhere near the ocean, with a shop on a property that I owned. I started looking at Maine. I moved here (with my husband at the time) and found a place with a barn that could become my metals studio. It was a huge change in overhead.

Living in rural places is becoming more and more popular with creative people. Cities are becoming more and more expensive, and it's hard to make money in a creative field. It's such an undervalued profession. If this is how you want to live, you're going to have to work hard. It's never going to be the same as with other people who go to a typical day job. Living in a rural place makes it easier, especially when you have access to the internet. It's a supportive place.

A few weeks into the sensitive time of the pandemic, the studio has been quiet, as I navigate through stabilizing a safe way to live life in my own personal space and helping loved ones. My selling shows and teaching workshops are canceled for the summer, and my online orders have just about ceased. Although the new lack of deadlines does allow time to work through these safe living practices, as well as time to reach out to loved ones, friends, and customers to share compassion and support.

I've started to work on ways I can offer assistance to those in need through my work. I participated in a benefit raffle with a collective of artisans, donating 100 percent of the proceeds. We raised over $50,000 in a week. Seeing the positive power of that campaign inspires me to continue being supportive in similar ways, and strengthen the connection to my fellow craftsmen, the community, and to my customers. We all still need to find creative ways to pay our bills until we find a solution. I'm putting faith in developing stronger connections that give back. I think most of us artists are pretty used to using our creativity to find ways to get by during lean times. It is certainly never easy and can be very exhausting, but with each other's encouragement, I'm sure we will pull through and be closer for it.

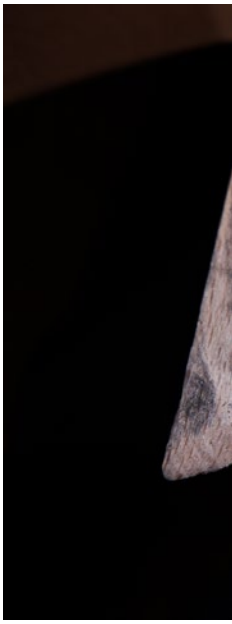
Claudia Lepik

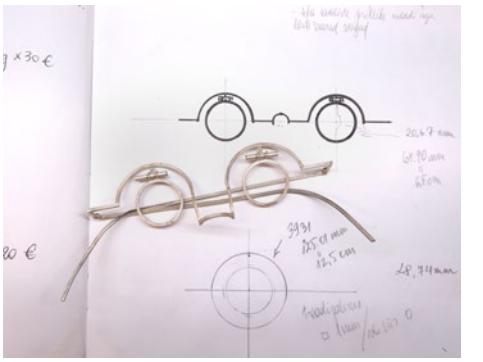
Claudia Lepik is a jeweler who is currently building her first studio in an old factory building on the outskirts of Tallinn, Estonia.

I grew up in South Estonia, in a city called Tartu. Estonia overall is like a black, dark cave most of the year, and I feel like a witch working in my small corner, creating magic throughout that hard period. Summers are for going out in Estonia, enjoying the victory over winter. Tallinn, where I live now, is a nice cultural hub. I don't like Tallinn much anymore. But I do love the area I live in; it's quite far from the city center, surrounded by forest, with a bog twenty minutes away from my home.

I was drawn to this craft because I love details. I love my hands, and I love working with them. At first, I wanted to study fashion design, but then it came to me that I would rather be the creator of small elements within the larger picture. I want to put my details all over. My main focus in jewelry is face and nose jewelry. I was doing my BA graduation project at the Estonian Academy of Arts (EAA) last year, and I wanted to find new ways of wearing jewelry.

For a little over a year, I rented a table at the jewelry department at EAA. I am setting up my own studio with my coursemate Sigrid





Kuusk as we speak. We are renovating a room in an old factory building, which now will start growing into a creative hub. Our studio is located in a rather rural area. It takes about twenty-five minutes to get to the city by tram, which is not ideal because then you have to plan your day accordingly. The studio has a big terrace, as the roof of the first floor is right next to our window. We painted the walls white and will have dark wood furniture. It is our first studio. We want it to grow as we grow.

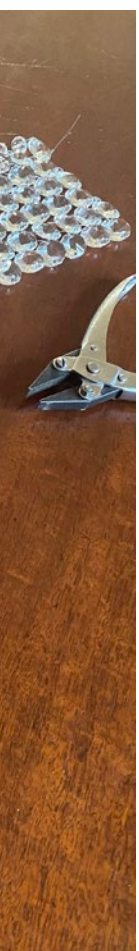
Ever since our normal world was torn apart by this pandemic, I lost the place at EAA where I had everything I needed to create my pieces and function normally. My commercial line sales have dropped massively, and I had to go back to work. I am okay with it. I do not want to lose myself in this. I want to slowly figure this out, especially my next steps. I have not had time to think about the future; now seems like a good time. My new normal is rather okay; nothing to complain about. I am not creating new jewelry at the moment, but I kind of like it. I am sketching and working slowly on new projects. Taking the time I didn't have before.

Everett Hoffman

Everett Hoffman is an artist, metalsmith, and educator living in Baltimore. He is preparing to move to Penland School of Crafts for a three-year residency later this year.

I'm a native Idahoan. I grew up living in Nampa and Meridian. For a long time, I had a desire to get out and escape the place I grew up in. As I was a rebel in high school, I always saw myself leaving Idaho, but didn't leave until after I graduated from Boise State University. I now think a lot about Idaho and how it has influenced my work. I still really love where I come from. I think it's a very special place.

A lot of my work references childhood memories, mainly growing up as a queer kid in Idaho. I have very distinct memories of playing Little League and always feeling as though I *had* to play baseball. The awkwardness of doing a team sport and also having a



weird attraction to other boys on my team always made me feel really uncomfortable. I don't know if that's an Idaho thing; it seems like an experience that a lot of queer people go through who grew up in the suburbs and more conservative-leaning states. A lot of my work also references my grandmother, who also grew up in Idaho and lived in Homedale. She was the maker in our family. She quilted, crocheted, and canned, habits that came from growing up during the Depression. The aesthetic of a handmade quilt and using what you have around you really influences me and my work.

Over the last six years, my studio has been in a constant state of flux. After graduating, my partner and I moved to Seattle, where we started a group studio with four of our friends. It was a wonderful experience, working alongside friends to bounce ideas off of and creating a shared community. I think that really influenced how I view my studio practice today. I like the aspect of going to a studio where you can see what other people are doing. Wherever my studio ends up being, I want aspects of that. My current studio is boxed up in our basement in my home in Richmond. Wherever that gets unpacked, it will be with my partner, who is also a metalsmith. When we live together, we both share a studio space. I really enjoy that.

Rachel Reichert is an artist and community organizer living in Boise, Idaho, where she and her team design place-based programs, spaces, and opportunities for other artists, writers, and creative thinkers. Learn more about her work at www.studioreichert.com.

The Hand and The Body

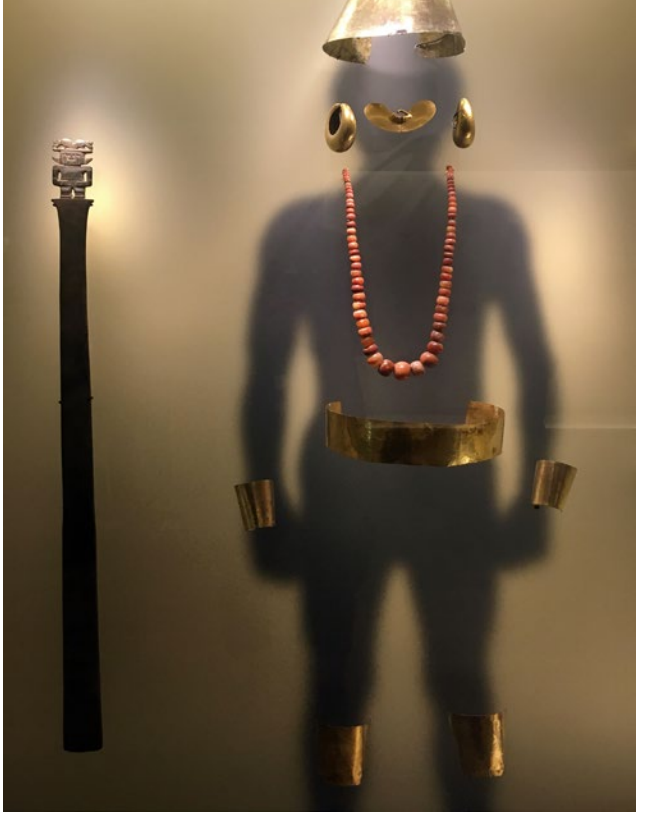
El Museo del Oro
Bogotá, Colombia
On permanent view

By Rebekah Frank

Visiting the collection of El Museo del Oro in Bogotá, Colombia, should be on the bucket list of every metalsmith in the world. Created in 1939 and made available to the public in 1959, it is managed by the Banco de la República with a mission to protect the cultural heritage of Colombia. It is the largest collection of pre-Columbian artifacts in the world, holding more than 55,000 pieces. For the purpose of this review, the umbrella term "indigenous" is used unless a specific cultural group is referenced, in lieu of using the geopolitical term "pre-Columbian."

With such an immense collection of indigenous objects, the experience could easily overwhelm. However, the museum's thoughtful arrangement of galleries and handling of displays builds a gradual understanding of the complexity of the objects. The museum is divided into four galleries, beginning with a look at the process of making, then moving to cultural use, followed by symbolism and ritual meanings, and ending with an immersive exhibit that symbolically returns the objects to the earth.

The first gallery, *The Working of Metal*, guides the viewer through various indigenous processes of making. Wall displays clearly explain them, beginning with a brief exploration of mining techniques, showing how nuggets of raw gold ore become the finished object. Handsets, provided free of charge, support the wall text with additional information. Display cases filled with objects, tools, enlarged micrographs, and simple line drawings illustrate complex processes and show how tools were used. Further displays showcase the range of metallurgy, metalsmithing techniques, variations in surface finishing, and object deterioration as the viewer moves through low-lit exhibition spaces. The text, visual illustrations, and objects work together to provide a show-and-tell narrative that neither assumes knowledge nor patronizes the viewer.



Wall display showing placement of wearable objects.
Photo: Rebekah Frank

The indigenous artisans' methods are familiar to modern metalsmiths. However, the tools used by pre–Iron Age cultures are fascinating to see, given that a metalsmithing studio today is difficult to imagine without steel tools. Stone axes and handheld hammers made from polished rocks, wooden tools with hardened tips, and even a handheld hammer made from found meteorite were used—a reminder of the ingenuity of humanity across time.

Research on the collection, illustrated through text, cartoons, and micrographs alongside the artifacts, highlights the advanced processes. For example, the Tumaco-La Tolita metalsmiths didn't use copper during the fusion process in granulation as researchers assumed, but instead heated pure gold to its fusion point. In another region, the Nariño manipulated the surface finish of *tumbaga* (an alloy of copper and gold) so it shone like gold using a natural acid solution made from wild sorrel, and created resists from tree resin.

The long hallway display that transitions the viewer from *The Working of Metal* to *People and Gold in Pre-Hispanic Colombia* includes a section on the deterioration and repair of objects. The display shows how *tumbaga* objects deteriorate through oxidation, creating a

The colorful palette of the patination in these objects stands out given the overall focus on gold and its stubborn refusal to do anything but shine over the ages.
Photo: Rebekah Frank

green patina on the surface. In addition, the meticulous repairs reaffirm the objects' value and use by the people who created them. There is power in seeing the reverence artisans took in the repairs.

In the exhibition *People and Gold in Pre-Hispanic Colombia*, the museum moves beyond material processes to cultural usage, further contextualizing the objects. For indigenous artisans, available materials, techniques, and regional preferences influenced their surface finishes, with some cultures preferring matte over shiny surfaces. In addition, friendly relationships between some groups allowed specific motifs and material treatments to move along trade routes.

Throughout the museum, human-scaled silhouettes behind frosted glass show how objects were worn. These silhouettes are placed so the viewer stands in direct relationship to the silhouette, as in front of a mirror. Many of the wearable objects don't immediately translate for the modern eye. For example, how would one wear a nose ring the size of a dinner plate that has several hinge points? The silhouettes provide a powerful assist to the viewer in imagining these complex objects activated by the body.

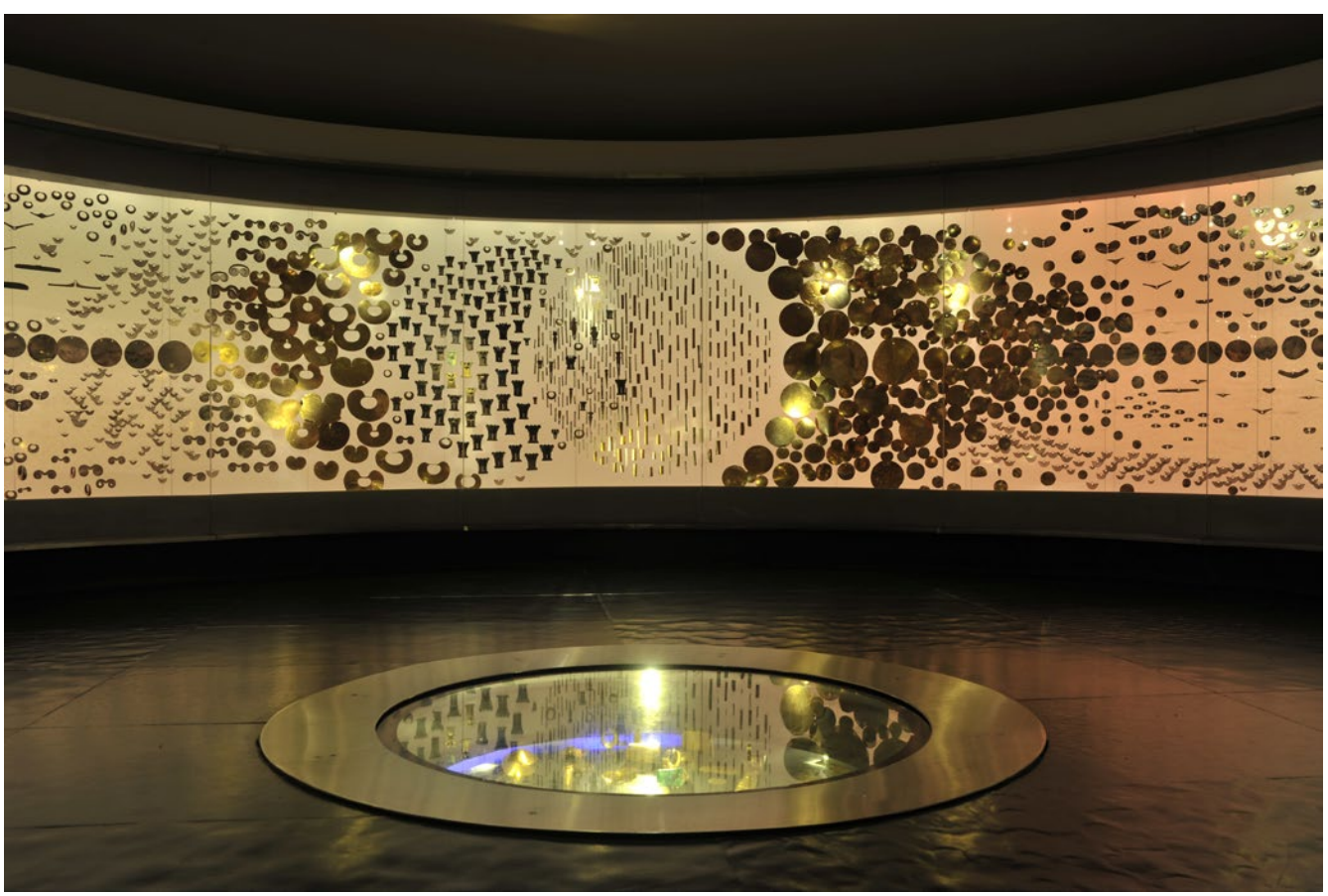
The museum's emphasis on understanding the material process continues in *Cosmology and Symbolism in Metalworking Societies*, with a focus on the transformative nature of creation. The ritual objects were used by indigenous people to symbolically move between worlds. The objects, decorated with geometric designs, zoomorphic, and anthropomorphic forms, assist the shamans in their communion with gods on behalf of the people.

In these indigenous ceremonies, the objects are returned to the earth. *The Offering* is an immersive exhibit intended to convey the spiritual nature of the ritual, with the assistance of special effects. Of course, reproducing a transformative ritual is difficult within the context of a museum environment. However, the exhibit provides a space for the viewer to reflect on how the indigenous ritual's intention was thwarted, first through the incursion of European colonialism, then by private collectors in the nineteenth and twentieth centuries. Now these ritual objects are held in a national collection, accessible to the public, but one wonders if the objects would rather be returned to the earth as the shamans intended.

The last object the viewer sees before exiting the museum is the *Muisca Raft*, a gold votive sculpture representing a raft and people casting objects into a crater lake. It is an impressively detailed diorama made of approximately 80 percent gold, shown to good effect in a darkened room. El Museo del Oro's efforts to build an understanding of the process of metalsmithing culminates in the viewer's ability to fully appreciate the intricacy, narrative power, and sheer volume of gold of this object. The *Muisca Raft* will never leave Colombia, which is yet another reason that every metalsmith should include this museum in their future travel plans.

Thanks to Ana María Gonzalez for fact checking and curator Héctor García Botero and the entire team at Museo del Oro for their work.

Rebekah Frank is a studio artist and independent writer who enjoys traveling the world in search of interesting experiences to fuel both her art and writing practices.



The Offering Room, Museo del Oro
Image courtesy of Museo del Oro. Banco de la República
Photo: Rebekah Frank

LOIS ETHERINGTON BETTERIDGE (1928–2020)

BY BARBARA ISHERWOOD

Lois Etherington Betteridge, 1977

Photo: Keith Betteridge

MUCH LIKE HER CREATIONS, Canadian silversmith Lois Etherington Betteridge was one of a kind. Recipient of numerous awards and accolades, Betteridge was a craftsperson, teacher, and mentor of unparalleled accomplishment. She died on February 21, 2020, at the age of ninety-one.

Born in 1928 in Drummondville, Quebec, Betteridge began her studies at the Ontario College of Art, then transferred to the University of Kansas. She'd planned to major in ceramics, but was swayed by the challenge of metals. "Metal has a mind of its own. But you're not fighting against it, you're working with it," she said. Betteridge graduated with a BFA in 1951, then completed an MFA at the Cranbrook Academy of Art in 1956. She lived and worked in London for six years, then in Ottawa, Mont-Saint-Hilaire, and Guelph, where she and her husband, veterinary scientist Keith Betteridge, settled in 1986. Her studio practice was complemented by leading workshops, teaching at the Haliburton School of the Art and Design, and mentoring individual students in her home studio.

Lois Etherington Betteridge
Tangled Garden (A tip of the hat to J.E.H. MacDonald), 1988
Raised copper patinated with pure silver
15 cm high
Photo: Keith Betteridge

Patently uninterested in the art versus craft debate, Betteridge was adamant that her works were functional. Objects designed "to celebrate the many rituals of our lives" could range from a brandy snifter, to a chalice for a church service, to a vase such as *Tangled Garden*, a tribute to Canadian painter J. E. H. MacDonald.

Betteridge's list of honors includes the Saidye Bronfman Award, the M. Joan Chalmers 15th Anniversary Award, Queen Elizabeth II Golden and Silver Jubilee Medals, election to the Order of Canada, the WM/YWCA Women of Distinction Award for Lifetime Achievement, and the Lifetime Achievement Award from the Society of North American Goldsmiths.

The artist's work is in such collections as the Victoria and Albert Museum, the National Museum of Scotland, and the Canadian Museum of History. Significant exhibitions include 1988's *Reflections in Silver and Gold*, and *Recent Works*, a 1990 national touring show. Two shows in particular reflect Betteridge's indelible impact. In 2000 the Macdonald Stewart Art Centre in Guelph organized *Lois Etherington Betteridge: A Tribute Exhibition*, featuring her work alongside seven silversmiths she influenced. The 2002 exhibition *Teacher, Silversmith, Mentor* was an homage featuring forty-two students who enjoyed her tutelage in Haliburton. In addition to extolling Betteridge's encouragement and generous sharing of knowledge, many spoke warmly of her bonhomie and organizing of class potlucks and swims in the nearby lake.

Betteridge is survived by husband Keith, son Eric, daughter Lise, and four grandchildren.

Barbara Isherwood is a Toronto-based writer, educator, and broadcaster.

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Every year, the MJSA Vision Awards celebrate outstanding achievements in jewelry making and design. The winning entries are profiled in the September issue of *MJSA Journal,* and will be displayed during the 2021 MJSA Expo at the Javits Center in New York City. For more information, go to *MJSA.org*.

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1) First Place, Professional Excellence, 4+ Years in Business, and **Winner, Laser Distinction.** "Blooming Cage" Brooch/Pendant by **Sophia Hu** of 6SHADOWS, Las Vegas.

2) Second Place, Professional Excellence, 4+ Years in Business. "Chrysanthemum Fold" Black Pearl Earrings by **Karin Jacobson** of Karin Jacobson Jewelry Design in Minneapolis.

3) First Place, Professional Excellence, 1-3 Years in Business. "Van Gogh's Gladioli Necklace" by **Larissa Moraes**, Brasilia, Brazil.

4) Second Place, Professional Excellence, 1-3 Years in Business and **Honorable Mention, Colored Stone Distinction.** "Van Gogh's Sunflower Earrings" by **Larissa Moraes**, Brasilia, Brazil.

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5) Winner, Custom Design Distinction and **Winner, Colored Stone Distinction.** 51 ct. "Floating" Ametrine Solitaire Ring by **Frieder Lauer**, Houston.

6) Winner, Responsible Practices Distinction. Rough Montana Sapphire and Diamond Dangle Earrings by **Karin Jacobson** of Karin Jacobson Jewelry Design in Minneapolis.

7) Honorable Mention, Laser Distinction. "Wreath" Brooch/Pendant by **Sophia Hu** of 6SHADOWS, Las Vegas.

8) Honorable Mention, Laser Distinction. "Moon Glow" Cuff by **Adam Neeley** of Adam Neeley Fine Art Jewelry, Laguna Beach, California.

9) Honorable Mention, Custom Design Distinction. Art Deco Ring by **David Dorian** of Dorian Jewelers, Watertown, Massachusetts.

10) Honorable Mention, Custom Design Distinction. "Ode to Notre Dame" Necklace by **Brenda Smith** of Brenda Smith Jewelry in Woodstock, Georgia.

11) First Place, Future of the Industry (Student Work). "Befitting" Ring by **Kyra Martin**, George Brown College, Toronto.

12) Second Place, Future of the Industry (Student Work). "Reverie" Bracelet by **Ashley Pollack**, SUNY New Paltz and GIA.

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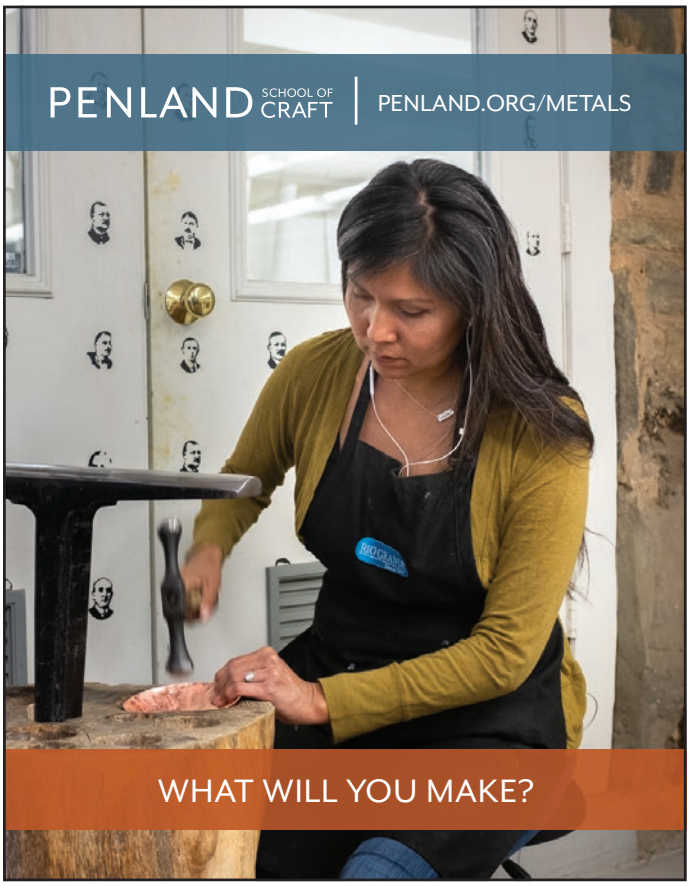

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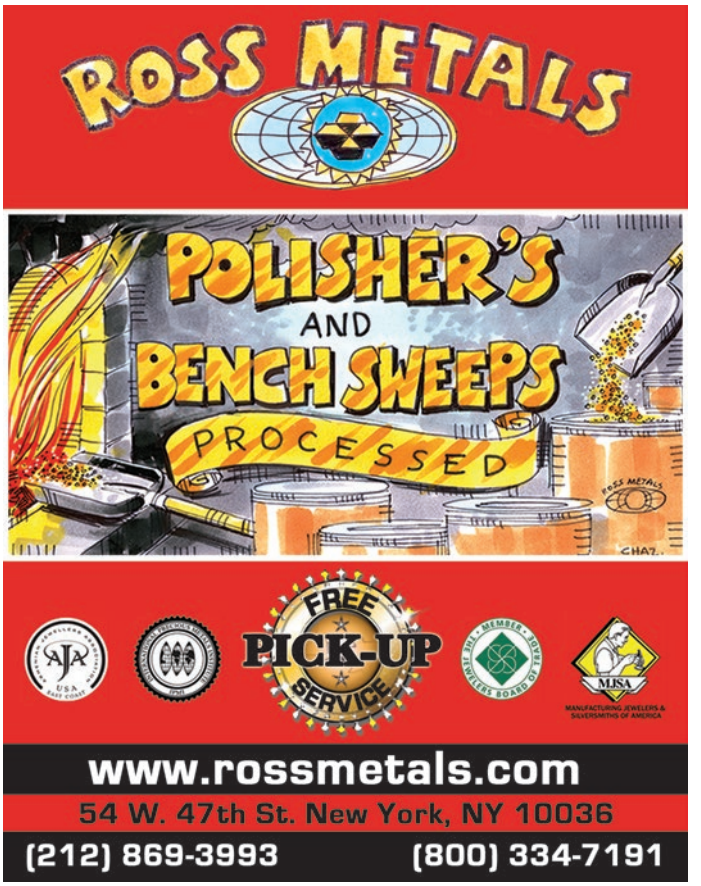

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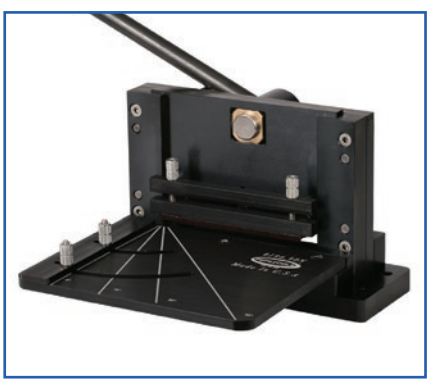

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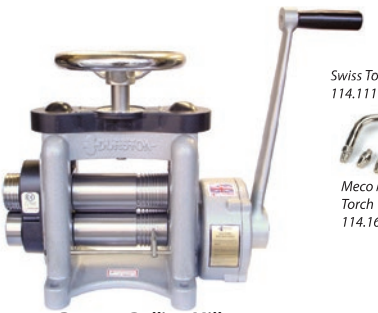

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